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COMMISSION ON EDUCATION IN AGRICULTURE

MEMO

TO: Members of the Commission on Education in Agriculture

FROM: Boyd F. Robinson, Jr., CEA Staff Person

SUBJECT: Final Report of the Commission on Education in Agriculture

Date: August 27, 1987

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Enclosed is a copy of the Final Report of the Commission on Education in Agriculture as will be presented to Governor Schaefer by Chairman James E. McClellan when he meets with the Governor on August 31, 1987. A copy of the report cover letter is also enclosed. Appendices and supporting documentation for the report will be sent later under separate cover. Chairman McClellan has suggested that your individual letters of support to the Governor would be highly beneficial.

On behalf of Chairman McClellan, Regina Smick, our CEA Intern, and myself, I wish to thank each of you for your outstanding efforts in making our report to the Governor as comprehensive and enlightening as possible. I will keep you informed as developments take place. Please contact me if I may be of service.

Thank you again for all your hard work. You were super!

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COMMISSION ON EDUCATION IN AGRICULTURE

August 27, 1987

The Honorable William Donald Schaefer
Governor of Maryland
State House
Annapolis, MD 21404

Dear Governor Schaefer,

The attached report of the Commission on Education in Agriculture is the culmination of eight months of indepth study. Members have reaffirmed that agriculture is one of Maryland's greatest resources which as a multi-billion dollar industry plays a vital sustaining role in the Maryland economy. As you peruse the report, you will be reminded of the diversity and scale of Maryland agriculture from its roots in on-farm production to its future in biotechnology and recognize that it is the breadth of agriculture from dairying to horticulture and beyond that make it Maryland's number one industry. You will also find as we have that our education in agriculture delivery system has not kept pace with the fast changing industry it serves.

In recognizing the increasing education and training needs of the agricultural industry, the Commission proposes a Maryland Model for Education in Agriculture designed to restructure and revitalize existing educational components and to incorporate new components that will provide for a comprehensive education in agriculture delivery system. Commission members believe that cooperative efforts by agricultural business and industry, State government, and involved State Agencies to implement the report recommendations will lead to a viable, nationally recognized delivery system.

On behalf of the sixteen Commission members, I respectfully submit this report for your consideration. We are eager to serve and stand ready to assist you in providing for state-of-the art education in agriculture for Maryland. Thank you for your interest in Maryland agriculture.

Sincerely,

James E. McClellan, D.V.M.
Commission Chairman
Maryland House of Delegates

THE FINAL REPORT

OF

THE GOVERNOR'S

COMMISSION ON EDUCATION IN AGRICULTURE

Submitted by the Members of the Commission
for review by Governor William Donald Schaefer
and the Citizens of Maryland
August 27, 1987

EXECUTIVE SUMMARY

Agriculture is Maryland's number one industry generating over six billion dollars and employing over 450,000 people in diverse areas from apples to seafood, cut flowers to turfgrass, poultry to dairying, biotechnology to farm machinery, agricultural finance to international trade and landscaping to lawn and garden sales and service. Employment demands in agriculture require a trained workforce with strong education in agriculture programs to provide that training for Maryland citizens.

The education of Maryland's citizens should be the top priority as we move into the 21st century. Education in agriculture combines two elements of utmost importance to continued prosperity. The industry of education prepares our youth and adults for their life's work while the industry of agriculture guarantees our very existence. To maintain and expand the industry of agriculture, it will be necessary to revitalize and restructure education in agriculture.

The general public including many agriculturalists simply do not understand the diversity and scale of the agricultural industry in Maryland. Citizens are unaware of the 200 plus careers in agriculture and the substantial impact that the agricultural sector has on the Maryland economy. Today, there are fewer people with agricultural experience and training to serve successfully the growing and complex agricultural business and industry. Maryland must recognize the importance of education in agriculture and significantly strengthen its secondary and postsecondary programs in agriculture and prevent the ever increasing outward flow of its residents seeking education in agriculture in other states. Further, agricultural employers must be provided with a Maryland trained workforce in agriculture so they will not be forced as is the current case to seek out-of-state individuals to fill positions. Failure to address the situation will result in a serious gap between the pool of potential agriculturalists and available agricultural positions and will stifle an expanding agricultural economy.

Members of the Governor's Commission on Education in Agriculture recognize that an accepted view of the make-up of the agricultural industry does not exist and seek to remedy that situation by providing a definition for agriculture appropriate to Maryland. Agriculture is an applied science pertaining to plants, animals and their environment that requires knowledge, skills, and orientations related to producing, managing, processing, financing, marketing, distributing, regulating, improving, servicing and/or protecting, edible, non-edible or environmental resources. The Commission recommends that this definition be adopted by the State of Maryland to serve as a policy statement providing guidance to state agencies, as well as clarification for the general public.

Other recommendations developed by the Commission relate to the many aspects of education in agriculture in Maryland from elementary education to teacher education in agriculture at the University level. Recommendations are based upon testimony from citizens and agricultural business and industry, surveys of educational systems, research by committees and the experiences and expertise of Commission members. The report of the Commission details recommendations that will improve and enhance education in agriculture and provide the foundation for a strong agricultural business and industry in Maryland.

Many of the recommendations of the Commission are embodied in a proposed Maryland Model for Education in Agriculture. The Model provides a comprehensive and systematic basis for education in agriculture from kindergarten through postsecondary. The Maryland Model will serve to accomplish the goal of

revitalizing and restructuring education in agriculture programs by updating curricula to the standards of today's highly technical agricultural industry. At the K-8 level, the Model concentrates on agricultural awareness and the infusion of agricultural concepts into the curriculum, at the 9-12 level the Model proposes a restructured program emphasizing agriculture science and technology and at the postsecondary level, the Model calls for expanded regionalized technical programs in agriculture and an improved teacher education program. It will serve those individuals choosing a career requiring entry level skills from a secondary or two-year postsecondary program, or the individual wishing to pursue higher education requiring four-year training.

The Commission recognizes the gross inadequacy of the system for compiling and reporting agricultural labor needs and recommends the situation be corrected and that a statewide placement and follow-up service program be developed to complement an improved labor forecasting system. Maryland youth would be more adequately served through the accurate identification of industry labor needs while the educational process could more effectively plan training programs to supply such industry needs.

Identified as a critical concern was the poor and narrow concept the public has for Maryland agriculture. The establishment of an ongoing Interagency Coordinating Committee for Education in Agriculture to develop and disseminate promotional and informational materials to broaden and more accurately portray Maryland's agriculture to the general public is recommended by the Commission.

Today's dynamic agriculture dictates that we must pursue ways of keeping curriculum current and providing for the speedy dissemination of information as it is revised. Likewise, students and teachers must be able to retrieve data that is accurate and current. The Commission recommends the establishment of a Maryland Computer Network for education in agriculture coordinated through the Division of Vocational-Technical Education for use in secondary and postsecondary agriculture programs as well as teacher education programs to provide access to general and agricultural data bases.

Because the responsibilities of agriculture instructors at the secondary and postsecondary levels involve the year-round care of plants, animals and student enterprises, twelve month programs are essential. Keeping teachers current and trained in state-of-the-art skills for a rapidly expanding agricultural industry is vital. Our teachers must be well-educated in the high tech applications of plant and animal sciences, and in the fast changing areas of agricultural mechanics and agricultural computer applications. In short, they must fit educationally the definition of agriculture and be able to stay current with changes occurring almost daily. More effective and extensive inservicing is a must. Additional staff for teacher education and state leadership must be made available to plan, coordinate and deliver this training in conjunction with industry resources. Preservicing of prospective teachers must also deliver an educational package to fit those requirements. In its report, The Commission makes recommendations to address these concerns.

Lastly, the Commission addressed the need for a permanent body similar to the present one to continually address needs in education in agriculture. Additional representation from other key State and Federal Agencies is suggested. If such a body had been in existence in the past, conceivably our education in agriculture delivery system would not be in such dire need of overhaul. In the interim, we also recommend the present Commission be continued to work with the Governor, Legislature and effected Agencies to implement the recommendations of this report.

GOVERNOR'S COMMISSION ON EDUCATION IN AGRICULTURE

William Donald Schaefer, Governor
Delegate James E. McClellan, Commission Chairman

Mr. Roland Behnke
Agricultural Industry
Mrs. Christine Bloom
MD Dept of Agriculture
Mr. Alan Brauer
Agricultural Industry
Mrs. Martha Clark
Agricultural Industry
Senator Bernie Fowler
Maryland Senate
Mr. Edwin Fry
Agricultural Industry
Ms Karen Hamilton
Maryland FFA Assn
Mr. Jack Lancaster
State Council on Voc Ed
Delegate George Littrell
MD House of Delegates
Mr. David Miller
MD State Dept of Educ.
Dr. Mortimer Neufville
U of MD Eastern Shore
Mr. Ed Quidas
Agricultural Industry
Dr. Jerome Ryscavage
MD School Superintendents
Dr. Ronald Seibel
U of MD College Park
Mr. Steen Westerberg
MD Agr Teachers Assn

Representatives from Governor's Staff: Dr. Laslo Boyd and Ms Gail Fink

Commission Staff: Dr. Boyd Robinson, MD State Department of Education
Ms Regina Smick, Commission Summer Intern

Charge of the Commission

The Commission on Education in Agriculture was established through House Joint Resolution #51 in April 1986. The charge to this body was to (1) examine the existing programs and policies concerning education in agriculture from kindergarten through the twelfth grade, vocational agriculture in the high schools, postsecondary technical training and teacher education in agriculture at the university level, (2) to ascertain the current status of education in agriculture in the State of Maryland and (3) to make recommendations to improve and enhance education in agriculture programs throughout the state. The final report is to be completed and submitted to Governor William Donald Schaefer by September 1, 1987.

Activities of the Commission

The members of the Commission are representative of agricultural business and industry, education in agriculture, appropriate State agencies and the Maryland General Assembly. Since the organizational meeting in December, numerous activities have been conducted and many individuals and groups have been contacted to present testimony and provide pertinent information to the members. Commission members have met on sixteen separate occasions for meetings and work sessions including three public hearings held in various locations throughout the state. A tour of secondary agricultural programs and facilities was planned and conducted by the Maryland Agriculture Teachers Association for Commission members and guests.

Visits were also made to postsecondary programs and teacher education programs in Maryland. Additionally, Commission members traveled to Philadelphia to tour and examine the W. B. Saul High School for Agricultural Sciences. The Commission was divided into K-8, 9-12 and Postsecondary committees for the purposes of indepth study. Each of the committees met to address the important issues relevant to their segment of education in agriculture. Members from each committee also attended some of the more than twenty work sessions to draft the preliminary report. A final public hearing was held on Wednesday, August 12, 1987 at Walkersville High School to hear response to the preliminary report.

PREFACE

Agriculture is the nation's number one industry, employing 22 percent of the available workforce and accounting for a total of 23 million jobs in the United States. In the process of feeding and clothing the nation and the world, agriculture accounts for over 20 percent of the nation's gross national product, a figure in excess of 600 billion dollars. In Maryland, agriculture is also the number one industry generating over six billion dollars and employing over 450,000 people in diverse areas from apples to seafood, cut flowers to turfgrass and poultry production to farm and garden sales and service. The history of Maryland agriculture is rich with its roots tracing to the original thirteen colonies. Since then, agriculture has made tremendous gains in 200 years until today, agriculture in Maryland is more than most people can imagine!

Education is vital to the public interest in Maryland and is offered in both the public and private sector from the public educational systems to private industry sponsored training programs. Instruction is available on the kindergarten, elementary, secondary, community college, technical institute, college, and university levels. Education is required for 95 percent of employment opportunities with 70 percent requiring postsecondary education. Education should be Maryland's top priority as we move into the 21st century.

Education in agriculture combines two elements of utmost importance to continued prosperity. The industry of education prepares our youth and adults for their life's work while the industry of agriculture guarantees our very existence. Attention must be drawn to the critical role that education in agriculture plays in assuring the continuation of a stable Maryland economy. The Maryland agricultural industry, including such diverse elements as landscaping, nursery, floriculture, forestry, biotechnology applications, agricultural recreation and a host of other emerging areas embodies and exemplifies the entrepreneurial spirit that characterizes our country. To maintain this country's number one position in world agriculture, we must continue to improve and expand education in agriculture to serve a new generation of agriculturalists who will assume the leadership in diverse occupations in agriculture and related fields.

To maintain and expand this key Maryland industry and its resources, it is necessary to restructure education in agriculture. The swift growth of the horticulture and greens industry, the myriad of agricultural applications in the explosive biotechnical field, the thriving housing market with its attendant landscaping demand as well as the stable production sectors of commercial fishing, farming and forestry all account for a dynamic Maryland agriculture that demands an extensive knowledge base.

A revitalized education in agriculture will require efforts of educators, agriculturalists and the general public. A poor image of the programs at the secondary level, inadequate facilities and equipment, out-of-date course offerings and a lack of understanding by guidance counselors and local administrators as to the value of agricultural programs are among the problems education in agriculture continues to face. Legislative action is needed to ensure the continuation and improvement of the education in agriculture delivery system. Maryland is not the first state to recognize the extreme significance of quality education in agriculture. States from California to Vermont, Illinois to Idaho and Connecticut to Mississippi, as well as others have recently enacted legislation to guarantee the expansion and improvement of quality education in agriculture. Maryland is not unique in this quest but without success in this effort, a thriving segment of Maryland's economy, agriculture, may be placed in jeopardy.

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WHY EDUCATION IN AGRICULTURE

Education in agriculture is important to all citizens of Maryland whether they utilize knowedge of agriculture as consumers or as employees in the diverse agricultural industry. Among the ideas and considerations generated by the information gathering process of the Commission was one key point that surfaced repeatedly. The general public including many agriculturalists simply do not understand the diversity and scale of the agricultural industry in Maryland. Citizens are unaware of the 200 plus careers in agriculture and the substantial impact that the agricultural sector has on the Maryland economy. In the midst of a vast agricultural industry the average person perceives little agriculture not found on the farm.

The reasons for this dilemma are many, but a major factor is the lack of systematic effort to collect and disseminate information about the total agricultural industry in Maryland. Such efforts now are fragmented and though some excellent activities occur within specific segments of the industry, adequate information and description of the total agricultural enterprise is lacking. In most cases, facts and figures that are readily available refer only to the food and fiber segment of the industry. While those figures alone make agriculture the most important industry in the state, the addition of such elements as ornamental horticulture, forestry, agricultural sales and services, wildlife, recreational use of land and resources as well as others nearly doubles the size of the total agricultural industry. Table I and Table II highlight the Maryland agricultural industry though such elements as biotechnology applications, agricultural exports, and the agricultural finance sector are not included.

ECONOMIC IMPACT OF THE MARYLAND AGRICULTURE INDUSTRY

TABLE I

RETAIL VALUE	PER YEAR
Maryland Farm Products	3500 million**
Horse Industry	964 million**
Turfgrass Industry	518 million**
Forestry and Forest Products	440 million**
Ornamental Horticulture Industry	232 million**
Wildlife Industry	Figures not available
Seafood Industry	Figures not available
Aboriculture Industry	70 million**
State and Local Parks Services	Figures not available
Agricultural Services (1978 US census)	113 million
Agricultural Services Payroll (1978 US census)	45 million

** Sources: 1986 MD Dept of Agriculture, the Department of Natural Resources, the MD Turfgrass Council, the Univ of MD, and the MD Aboriculturalists' Assoc

FACTS ABOUT THE VITAL MARYLAND AGRICULTURAL INDUSTRY

TABLE II

Commodity or Service	National Ranking	Units Produced or Dollar Volume
Poultry sold	Maryland, 6th*	285,000,000 birds
Poultry sold (Meat type)	Maryland, 10th	$378,000,000
	Wicomico, 5th*	99,347,000
	Worceste, 7th*	88,065,000
	Somerset, 13th*	53,824,000
	Dorchester, 17th*	27,760,000
	Caroline, 21st*	not available
Tobacco	Maryland, 7th	32,280,000 lbs.
	St. Mary's, 44th	10,895,634 lbs.
	Charles, 83rd	7,331,601 lbs.
	Calvert, 97th	6,042,457 lbs.
Barley (for grain)	Maryland, 13th	4,251,789 bushels
Corn (for grain and seed)	Maryland, 18th	62,845,556 bushels
$Crop Sold/acre harvested	Maryland, 20th	$222/acre
Dairy Products Sold	Frederick, 25th	$ 70,794,000
Acres Vegetables Harvested	Maryland, 18th	37,167 acres
Value of Nursery Greenhouse Products Sold	Baltimore, 79th	$ 9,680,000
Inventory of Horses and Ponies	Baltimore, 48th	3,515 head
Hay Harvested (Other than Alfalfa)	Frederick, 62nd	55,488 tons
Agricultural Services	Maryland, 25th**	
	Montgomery, 38th**	
	Baltimore, 60th**	

*These rankings are 1986 figures furnished by Delmarva Poultry Industry
**These rankings are 1978 Agriculture Census findings
Other figures are from 1982 Agricultural Census

JOBS IN THE AGRICULTURE INDUSTRY

Human capital to support agriculture has become one of the most critical needs of the late 20th century. There are fewer people with agricultural experience and backgrounds to draw from in the secondary, postsecondary, and higher education programs in agriculture to serve successfully the growing and complex agricultural industry. Failure to address the situation will result in a serious gap between the pool of potential agriculturalists and the agricultural positions available which will stifle an expanding agricultural economy in Maryland.

Identifying the need for agriculturally trained workers is extremely difficult due to the grossly inaccurate manpower data available. For example, The Department of Employment and Training projects for 1990 for the areas of agriculture, forestry and fishing a total employment of 20,765, a figure that is conservative by a factor of twenty. If one were to believe current labor projections for agriculture, then there would be little need for a Maryland delivery system for education in agriculture. However, looking at some of the facts and figures gleaned from industry puts a new light on the subject.

* Montgomery County employs 6000 people alone in 261 landscaping firms and projects the need for another 1500 in the next five years.

* An indepth needs assessment for agriculture in Anne Arundel, Calvert, Carroll, Charles, Frederick, Howard, St. Mary's, and Washington Counties shows a five year need for an additional 784 full-time and 409 part-time employees.

* According to the Maryland Department of Employment and Training, employment of groundskeepers/gardeners will grow by 36 percent between 1980 and 1990. It is projected there will be an average of 1,215 openings per year through 1990.

* The Maryland Greenhouse Growers' Association reports that the floriculture industry has shown an annual growth rate of more than 10% in each of the last seven years. The demand for floriculture products and services in Maryland is so great that local producers are unable to supply this expanding industry. Industry observers report that up to 90% of the cut flowers used in Maryland originate in other states or foreign countries. The bedding and pot plant growers in Maryland supply only 30% to 45% of the plant material sold in Maryland. The ability to supply this growing demand is strongly hampered by the inability of the industry to find and retain interested, productive, and well-trained employees.

* United States Colleges and Universities are presently supplying only 44,000 agricultural graduates for the 48,000 openings. The projections for the future appear even less encouraging than the present situation. Positions available in agricultural management, processing, science, and engineering exceed supply by 18 percent and the shortage in agricultural administration and finance is 30 percent.

THE NEEDS OF A CHANGING STUDENT CLIENTELE

Population demographics of the State of Maryland are rapidly changing. Students are coming from increasingly more urban and suburban backgrounds. In the past, rural and farm backgrounds provided hands-on practical experiences and an orientation toward agriculture. Many students in current agricultural programs are third and fourth generations away from the farm. At present, there are not enough people reared in a hands-on agricultural environment to meet the employment needs of the vast agricultural industry. In addition, there are fewer medium

size family farms and this small pool will continue to decrease. The time has come for a major effort to be initiated to attract students from all backgrounds to the world of agriculture.

The past twenty years have ushered in dramatic changes in the agricultural industry. These changes have been brought about by new technologies such as genetic engineering, improvements in management and marketing techniques in production areas and the emergence of new areas of agriculture in agricultural sales & services, landscaping, aquaculture, hydroponic vegetable production and biotechnology. Such changes have not been visible to or recognized by the average citizen, especially those in urban and suburban settings, as part of agriculture. This resultant decrease in visibility has inadvertently disguised the fact that agriculture plays a vital role in the lives of every Maryland citizen. Today's students from kindergarten through high school are unaware of the vastness of agriculture, its importance to their survival, or the abundance of career opportunities available in the industry.

Today's youth are oriented toward high technology and science and live in a world of computers and electronics, fast food, instantaneous communication, diversified transportation and a fast changing knowledge base. Each year there are 60 million new pages of technical material published worldwide. At that pace, the half-life of knowledge is approximately seven years such that by 1994, fifty percent of current knowledge will have been replaced. This tremendous information explosion will orient tomorrow's students to quick learning and the instant use of knowledge for decision making tasks. What remains unrecognized by the general public is that today's agriculture is in the forefront of the fast changing knowledge base and is on the cutting edge of biotechnology applications which may lead to a revolution in our food, fiber and other delivery systems involving plant and animal industries.

We must gear our education in agriculture programs to the reality of the high tech nature of the evolving agricultural industry. Students in such programs will need to be thoroughly grounded in science and technology principles together with education and training in leadership and citizenship development which agricultural programs have traditionally incorporated into coursework.

Minorities, including women, have traditionally been underrepresented in occupations related to agriculture. The recruitment of minority students into education in agriculture programs is of paramount concern. The inclusion of these populations can enhance the educational experiences of all. Active recruitment of blacks, Hispanics and women must be accomplished to prepare them for employment opportunities.

There is little doubt that the clientele for education in agriculture programs has changed substantially in recent years. The needs of this clientele must be examined in light of the labor demands of a rapidly changing agricultural industry and the necessary changes implemented in education programs for agriculture.

AGRICULTURE DEFINED

One of the most compelling causes for the problems relating to education in agriculture is found in the lack of an adequate definition of agriculture and agricultural employment. If either one or both definitions are limited to production, a considerably narrow scope of agriculture is projected. In order for a definition to be established, we must start with the basic fact that agriculture

is a conglomerate of applied sciences pertaining to plants and animals and all knowledge, skills and orientations attendant thereto. Thus a lawn care business and its lawn care employees that works for a non-agricultural business conducting a job utilizing skills in botany, agronomy, horticulture and management is an agriculturalist.

It must be recognized that the term agriculture or agriculturalist from an employment standpoint does not pertain only to those that work on farms, but also those who must have agricultural knowledge, skills or orientations relating to: producing, managing, processing, financing, marketing, distributing, regulating or protecting any agricultural product or renewable natural resource. From an industry viewpoint, the same correlation should be used in determining what is and what is not an agricultural pursuit. Using the same reasoning, one can determine that an agricultural service industry is one which requires agricultural knowledge, skills, or orientations. Thus the landscaper, the veterinarian, the tractor supply parts manager, the interior plantscaper, the agricultural loan officer at a bank, the farm editor and the garden program radio broadcaster are all agriculturalists.

Given the above we feel an acceptable definition would be:
Agriculture is an applied science pertaining to plants, animals and their environment that requires knowledge, skills, and orientations related to producing, managing, processing, financing, marketing, distributing, regulating, improving, servicing and/or protecting, edible, non-edible or environmental resources.

THE STATE OF EDUCATION IN AGRICULTURE

Current Programs

At the kindergarten through eighth grade (K-8) levels in Maryland schools, there appears to be a lack of systematic instruction in the area of agriculture. A survey by the K-8 committee of the Commission showed that any instruction at the K-8 level in agriculture varied significantly in content and scale from county to county. While most counties provided some type of field trip related to agriculture, only one-third had actually adopted or implemented the Agriculture in Maryland Resource Unit developed over seven years ago. However, most local systems did utilize some instructional materials in agriculture at the K-8 level.

Formal instruction in agriculture occurs in several junior highs in Montgomery County and there is one Agricultural Arts program offered in one of the schools in Baltimore County where all students receive instruction in agriculture at the seventh and eighth grade levels. It seems apparent that, statewide, there is little systematic instruction at the middle school or junior high levels.

At the secondary level, there are 56 high schools that offer programs of vocational agriculture currently serving slightly under three thousand students. While these programs have evolved in an attempt to meet changing industry needs, many are still offering fairly traditional production oriented instructional programs.

A substantial number of secondary programs do not meet state program standards in one or more areas primarily due to facilities that were established prior to changes in standards. While almost all production agriculture programs include horticulture components and all but two or three programs have greenhouses, instruction in the areas of nursery, turf, landscaping, forestry and natural resources lag behind the needs.

Another major instructional area currently being offered in some school systems at the secondary level is ornamental horticulture. Instruction in horticulture is offered at twelve high schools and twelve area vocational centers, with over seven hundred students being served. While curricula in ornamental horticulture in those programs are relatively up-to-date, facilities to deliver such instruction need substantial improvement. State-of-the-art facilities and equipment are not available in either ornamental horticulture or production agriculture.

In general, programs at the secondary level in Maryland are characterized by highly motivated and dedicated teachers, interested but low numbers of students, curricula that is in need of revision, facilities and equipment that were somewhat adequate for programs of a decade ago but are inadequate for today, and staffing that is inadequate to meet the demands of the extended day, greenhouse, and land laboratory management activities.

Postsecondary (two-year) programs in agriculture are offered in seven of Maryland's 17 community colleges and the Institute of Applied Agriculture located at the University of Maryland, College Park. The enrollment in these programs was reported to range from a low of four students to a high of 105 students with a total state enrollment of 375. A total of 21 full-time and 25 part-time teachers were involved in the instruction of 23 identified programs. Two, two-year agricultural transfer programs were also reported. (1986 Directory of Postsecondary Programs in Agricultural and Natural Resources Occupations by the U.S. Department of Education and Maryland Community Colleges Program Guide 1986-87).

Three Maryland agricultural programs are designated as regional programs by the Maryland State Board for Community Colleges (SBCC). These include the Forestry Program at Allegany Community College, Retail Floristry at Dundalk Community College and Wildlife Management at Garrett Community College.

Based on testimony given, it appears the demand by industry for two-year graduates exceeds the supply in nearly all program areas. Several segments of Maryland's agricultural industry have no source of personnel with educational preparation from a two-year postsecondary program in agriculture.

The needs of students are not and cannot be met by each individual institution. Thus, problems to be addressed include: the identification of essential programs; the strategic placement of programs throughout the state so as to best utilize existing resources; and the development of a funding mechanism to provide equal access for all residents who seek an education beyond the high school level.

There are two agricultural teacher education preparatory programs in the State of Maryland. One is in the Agricultural and Extension Education Department in the College of Agriculture at the University of Maryland, College Park Campus and the second in the School of Agricultural Sciences at the University of Maryland, Eastern Shore Campus. Both programs provide preparation for secondary

level teacher certification, and both programs are inadequately staffed and equipped to support a viable statewide agricultural teacher education program.

Maryland's situation in teacher education is not unlike the problems found nationally. The agricultural teaching profession needs a continuing supply of highly qualified teachers. In 1986, there were 11,042 secondary agricultural teaching positions nationwide. Nine hundred and sixty four new teachers qualified to teach in 1986. Only 41.2 percent of those qualified to teach entered teaching. Twenty positions in 1986 were reported not filled because a teacher could not be found. This scarcity of teachers impacts on the quality of teachers entering the profession.

Education in Agriculture Defined

Education in agriculture has in the past been compartmentalized into general, academic and vocational categories but agricultural instruction in the future must transcend such arbitrary lines. The arena of agriculture encompasses life sciences, mathematics, physics, social studies and communication skills as well as the traditional technical and applied aspects. Due to its multiplicity, education in agriculture should be integrated into the curriculum at every grade level.

After reviewing testimony, visiting educational sites and discussing extensively the situation of education in agriculture in Maryland, Commission members adopted the following definition of education in agriculture. Members felt strongly that education in agriculture must be viewed as a continuous process with many entry and exit points to meet all citizen needs for agricultural instruction from consumer orientation to post-professional preparation for careers in agriculture.

Education in Agriculture as defined by the Commission is organized instruction that:

(a) assists individuals in making informed choices about occupations;

(b) assists individuals in preparing for successful entry level employment, entrepreneurial opportunities and professional service in agricultural and related occupations;

(c) assists individuals in developing knowledge and skills in leadership, cooperation, and citizenship useful in fulfilling occupational, social and civic responsibilities and

(d) ensures an adequate supply of educated individuals with job-seeking, employment, and job-retention skills to meet the needs of agricultural and natural resources business and industry.

MARYLAND MODEL FOR EDUCATION IN AGRICULTURE

PREMISE: A revitalized and comprehensive plan for education in agriculture embodying the spirit of the proposed definition of agriculture must be developed to address the numerous inadequacies identified by the Commission on Education in Agriculture as specified in the following issues and recommendations section.

PROPOSAL: Develop a Maryland Model for Education in Agriculture to meet the employment needs of the six billion dollar Maryland agricultural industry. (Recommendation 1)

RATIONALE: In the past, education in agriculture in Maryland has been, for the most part, absent at the elementary and middle school levels and fairly rigid in its structure at the secondary level. Many secondary programs have courses which are traditional in nature and which are in need of revision. Such instruction has been highly occupationally oriented due to the federal regulations which accompany the funds received by the state and local educational agencies for vocational education in agriculture. At the postsecondary level some quality programs have been found, but, overall, the coverage has not been comprehensive. Teacher education programs in agriculture are not satisfying preservice and inservice needs. Lack of accurate agricultural employment data makes effective program planning impossible. Current education in agriculture programming is inadequate to meet the needs of the expanding Maryland agricultural industry causing many agricultural businesses to seek employees from states other than Maryland. Consequently, there is strong justification for new and revised agricultural programs at all educational levels.

GOAL: Prepare twenty percent of our future labor force for careers in the diverse industry of agriculture.

METHOD: Improve the educational delivery system for agricultural instruction through increasing its capacity, by revising, restructuring, reorganizing and articulating the curricula at all levels, and by adding components to provide for a system that is accessible to all students with interests in agriculture.

FUNDING: A grant should be provided to the Maryland State Department of Education, Division of Vocational-Technical Education to be used in contracting for the development and delivery of a Maryland Model for Education in Agriculture.

COMPONENTS OF THE MODEL:

Pre-school agricultural awareness that reflects a realistic image of the fast changing agricultural industry through the development of media and instructional materials using public television and pre-school programs as a delivery system.

K-8 Infusion of up-to-date agricultural concepts in the science and social studies curriculum that is sequenced, progressive and articulated from grade level to grade level. The United States Department of Agriculture is encouraging each individual state to develop Agriculture in the Classroom programs to serve as a means of making all Americans aware of the agricultural industry. Among the States implementing this program are California, Illinois, New York and Alabama. Agriculture in the Classroom provides lesson plans, unit materials, newsletters and other information for integrated use for infusion into the primary grades curriculum. Statewide development and implementation of an Agriculture in the Classroom program can serve as the delivery system in Maryland for infusion of agricultural concepts into K-8 curriculum.

Middle Schools A career inventory that identifies students with an interest in agriculture to be mandatory for all students with reports of students with high agricultural interest levels sent to local A/A&RNR teachers. Agricultural Arts programs that provide for an introduction to the diverse industry of agriculture that stress agricultural science and biotechnology applications be developed and implemented in all local education agencies.

Secondary Comprehensive High Schools An integrated agricultural science and technology program based on quality standards that transcends general, academic and vocational lines and replaces current vocational agriculture programs is needed. The agricultural science and technology program would retain major elements of current vocational agriculture programs including classroom/lab instruction, entrepreneurship and work experience and leadership and citizenship development through the FFA student organization all which have contributed to its overwhelming success in the past. The proposed secondary program would engender new elements such as semester based units of instruction and flexible program options that will provide for a bridge to meeting the needs of both a fast changing agricultural business and industry and a student clientele group that is markedly different in its attitudes and orientation concerning agriculture. The revised curriculum to be implemented through an efficient computer based communication system. In addition, graduates must have access to adequate placement services. The proposed Agricultural Science and Technology Program is further illuminated in the Appendices.

Governor's High Schools for Agricultural Sciences The need for agricultural instruction in the highly urbanized areas of Maryland is critical due to the explosive expansion of agricultural careers in the areas of nursery, greenhouse production, landscaping, agricultural research, biotechnological applications, aquaculture, agricultural supplies, sales and service, and hydroponic applications. In other parts of the nation, notably Philadelphia and Chicago, high schools for agricultural sciences operating as magnate schools have served a population of students who traditionally have not been involved in the agricultural sector. Students with interests in the diverse field of agriculture would be served through this concept who might otherwise not be served.

Postsecondary Postsecondary (two-year) programs in agriculture supporting major areas of Maryland agriculture will be identified and placed throughout the state. Programs will be based in Maryland Community Colleges and in the Institute of Applied Agriculture. Each two-year institution will offer selected introductory courses, complimentary to both two-year and two plus two programs. Program duplication will be reduced by designating and funding all approved programs as statewide area programs providing level tuition for all participants. A strong articulation program (secondary to postsecondary to university) will exist to enhance the efficiency of the educational programs and to stimulate an elevation of educational goals and objectives by students of agriculture. The chart in the Appendices illustrates potential postsecondary education in agriculture.

Teacher Education State-of-the-art agricultural model teacher education facilities to be developed and adequately staffed to meet the needs of the entire agricultural education effort throughout the state. Responsibilities would include: graduate and undergraduate education; preparation for teacher certification; professional inservice education; curriculum development; and instructional material development.

ISSUES AND RECOMMENDATIONS:

LABOR MARKET PLACEMENT NEEDS AND PROJECTIONS

Labor Market Data & Projections

Recommendation:

2. A system for collecting, compiling, indexing and reporting agricultural labor force data must be created in the Department of Employment and Training that accounts for the organization and structure of the agricultural industry and provides statistics that can be readily utilized for agricultural education program planning.

Situation: At the present time, the Department of Employment and Training (DET) does not accurately collect and present the needs of the agricultural sector of the labor market in Maryland due primarily to collection methods. Current projections for labor in agriculture are woefully inaccurate as evidenced by a number of independent studies and by industry reports. For example, the 1982 DET employment figures show a total of 10,573 farmers and farmworkers in Maryland while the 1986 Census of Agriculture shows 16,184 farms in Maryland. Given at least one principal operator per farm and the additional 8,909 hired farm workers, working 150 days or more, the Agriculture Census accounts for a minimum of 25,093 farms and farm workers which is significantly at odds with the number reported by DET. In 1986, Maryland Department of Agriculture figures show 18,000 farms employing 31,000 full time farmers. The Maryland Department of Agriculture further reports that for each of the full time farmers there are seven other agricultural jobs generated in the economy.

Statistics for small and part-time farming are simply not collected. Given that the 1982 Census of Agriculture shows forty-six percent of Maryland farmers are part-time farmers with a full-time job off the farm, these people never show up in agriculture labor projections even though their training needs in agriculture may be as great or greater than the full-time farmer. Other areas also not included in agricultural labor projections are those employed in agriculture biotechnology, small landscaping firms, and independent entreprenuers in a variety of agricultural businesses and enterprises.

One of the major stumbling blocks to good agricultural labor projections is that data is collected and categorized on a basis that fits the manufacturing sector well but does not account for the structure and organization of the agricultural industry, hence, many jobs titles and occupational classifications in agriculture are simply not found in the Occupational Employment Statistics (OES) survey used by all states to collect and project occupational employment needs. There are only 18 agricultural specific job titles used by OES in Maryland and job titles used today such as gardeners, groundskeepers, blacksmiths, and food and skin graders are simply not useful in projecting the needs for interior plant designers, landscape crew foreman, lawn care workers, farriers or vegetable graders.

Justification: If Local Education Agencies are going to depend on labor market data for program establishment and retention then the data must be accurate, timely and readily useable for the planning of educational programs. Education in agriculture programs cannot be based solely on production agriculture needs. The labor needs of emerging agricultural areas must be accounted for in program planning.

Industry & Business Labor Demands

Recommendation:

3. An expanded education in agriculture system with increased emphasis on adding new programs and options at the secondary level and on adding new postsecondary technical programs suggested in the Maryland Model for Education in Agriculture must be initiated. Incentive funding be made available in the amount of $5,000 to postsecondary programs and $3,000 to secondary programs.

Situation: Currently, agricultural business and industry is importing employees from other states to fill positions. There are simply more positions available in Maryland agriculture at entry, technical, and professional levels than there are individuals properly educated and trained to fill such positions. Several landscaping businesses report routinely recruiting workers from Houston, Denver, Pittsburg, Richmond, Atlanta and other cities outside of Maryland's boundaries. This is one of several examples of the needs of Maryland agriculture being met by a labor force educated or trained outside the state. For each worker trained out-of-state, we have a corresponding unemployed Maryland worker that is performing an unproductive role in the Maryland economy.

Justification: The State of Maryland cannot be dependent upon other states to provide trained agricultural labor. Maryland must seek to make more of its citizens productive by bolstering support of education in agriculture programs.

Placement and Follow-up

Recommendation:

4. A coordinated statewide placement program for graduates of secondary and two-year postsecondary education in agriculture programs be established at the Institute of Applied Agriculture of the University of Maryland, College Park. Serving as a clearinghouse, the program will assist in matching agricultural career opportunities with appropriately trained program completers. The placement program must include job openings surveys and follow-up of program graduates at scheduled intervals.

Situation: Placement and follow-up activities in agriculture programs are lacking. While several high school departments and a few two-year technical programs systematically provide placement services and conduct follow-up activities for their graduates, more attention should be given to suchactivities by all institutions providing education in agriculture. Matching program graduates with job openings in the agricultural industry has been a localized and fragmented process with both graduates and industry suffering as a result. Industry expansion efforts are hampered by not having access to a sufficient number of graduates.

Justification: Without the advantage of follow-up statistics, realistic and economically sound program planning will be extremely difficult to implement. A statewide effort in this area would be beneficial to students, industry and educational institutions and would serve to improve the image of agriculture in the public eye.

INSTRUCTIONAL DELIVERY SYSTEMS FOR EDUCATION IN AGRICULTURE

Kindergarten through Eighth Grade (K-8)

Recommendations:

5. An agriculture in the classroom program must be formalized, funded and implemented through the Maryland State Department of Education that is uniform and consistent for kindergarten through eighth grades in each of the local educational agencies in Maryland.

6. A professional coordinator for K-8 education in agriculture programs and a half-time clerical person must be hired within the Maryland State Department of Education to develop curricula, disseminate and assist in the implementation of curricula and provide inservice for teachers responsible for K-8 education in agriculture.

7. An Agricultural Arts program must be developed, implemented, and initially funded through existing Carl Perkins Vocational Education Act federal funds in each of the local education agencies to provide middle school youth with pre-vocational skills and opportunities for career exploration.

8. An occupational interest survey such as the Ohio Vocational Interest Survey (OVIS) must be identified and administered by local education agencies to all Maryland eighth grade students that will identify overall agricultural interests and an agricultural interest survey such as the Applied Biological and Agribusiness Interest Inventory by Walker and Stevens must be administered to students showing high interest in agriculture.

Situation: Formalized agricultural instruction on the K-8 level can be found in seven of the 24 public educational systems. Informal instruction occurs quite frequently however, it is not classified as instruction in agriculture. Field trips to farms and science and nature projects are part of the informal instruction in agriculture. This is a good start but more must be integrated into the K-8 curricula of the state.

Justification: To begin to meet the needs of the agricultural industries and businesses of Maryland, an appreciation for and understanding of agriculture must begin at the start of the formal education of the child. Without exposure to agriculture, younger citizens will not enter agricultural related occupations or postsecondary and higher education programs necessary to maintain the agricultural industries and businesses we now have. The United States has become an "agriculturally illiterate" nation which, if left to grow, will undermine the vital agricultural segment of our Maryland and national economy. With many students coming from non-agricultural backgrounds, a vehicle is needed to identify those who may have interest in the vast realm of agriculture.

Secondary (9-12)

Recommendations:

9. An Agricultural Science and Technology Program that transcends general, academic, and vocational lines must be developed as specified in the proposed Maryland Model for Education in Agriculture to replace existing vocational agriculture programs and to allow for flexible program options that offer a wide variety of agricultural instruction for use in

comprehensive high schools, vocational technical centers, or the high schools for agricultural sciences. All local education agencies must offer a minimum of one program option in the area of production agriculture, one program option in the area of horticulture, and one other agriculture/agribusiness and renewable natural resources option consistent with the Maryland Model for Education in Agriculture.

10. Two Governor's high schools for agricultural sciences must be established in urban and suburban areas of the state to serve the rapidly expanding urban agricultural industry and the non-traditional population of urban students who can profit through a career in agriculture.

Situation: Instruction in agriculture in grades 9-12 is concentrated in the vocational agricultural programs of the high schools and vocational technical centers. There are currently 56 schools offering programs of vocational agriculture in the State of Maryland servicing slightly under 3,000 students. In 1981, education in agriculture at the secondary level served almost 5,000 students. The drop to less than 3,000 students in 1987 can be accounted for by many factors including the overall drop in high school enrollment and the competition for students to enroll in various other elective courses. The disturbing point though is that percentagewise less students are being served at a time when industry labor needs are rising substantially. Due to reduced resources, increasing graduation requirements, and increasing college entrance requirements many students with career interests in agriculture are being denied an opportunity to receive applied training in agriculture at the secondary level which would prepare them for entry level employment or for advanced instruction at the postsecondary level.

Justification: Education in agriculture at the secondary level is a vital component of the total delivery system. For a substantial number of students, secondary instruction in agriculture will be their last training prior to entering the world of work. The proposed Maryland Model for Education in Agriculture will serve to revitalize instructional programs at the secondary level to (1) make them an efficient and effective supplier of agricultural labor and (2) allow them to provide quality education in agriculture programs that students will need regardless of their career path. The additional component of two Governor's High Schools will provide education in agriculture to urban populations to serve the biotechnology industry in agriculture, the horticulture, turf, and landscaping industry, the aquaculture and seafood areas and the growing agricultural sales and services sector.

Postsecondary

Recommendations:

11. Regional and statewide postsecondary (two-year) agriculture programs must be established in selected areas of the state to capitalize on the use of geographically dominant agricultural and physical resources to be determined by a thorough study of existing resources and industry needs. Three basic introductory agriculture courses must be established in at least one community college per County to facilitate an articulated transfer program with the University of Maryland's agriculture baccalaureate degree programs, the Institute of Applied Agriculture or other regional or statewide agricultural programs.

12. An institutional budget, independent of other instructional budgets, must be established for two-year programs located at the University of Maryland which will permit staffing, facilities and operating procedures to meet or exceed national program standards for postsecondary technical education in agriculture. Procedures and policies for providing promotion and tenure must be developed for University faculty working in two-year agriculture programs comparable to those guidelines utilized in other two-year postsecondary institutions. A policy must be established permitting an Associate of Applied Science degree option for University two-year programs. The Institute of Applied Agriculture must be removed from the College of Agriculture's administration and placed administratively under the Vice President for Agricultural Affairs of the University of Maryland.

Situation: Educational opportunities existing on the postsecondary level are somewhat limited. The Institute of Applied Agriculture (IAA) located on the University of Maryland College Park (UMCP) campus offers the most comprehensive two-year agricultural programs. Programs offered by the Institute include Farm and Agribusiness Management, Turfgrass and Golfcourse Management, and Ornamental Horticulture Business Management with many options under each program. The IAA is currently serving 100-120 students per year.

Seven community colleges have one or more agriculture programs and collectively serve approximately 275 students annually. Regional programs in Forestry Technology, Retail Floristry, Veterinary Technology and Wildlife Management are located at Allegany, Dundalk, Essex and Garrett Community Colleges respectively.

Agriculture courses in the community colleges supporting a baccalaureate degree transfer program are extremely limited. Bacculaureate degree programs in agriculture are offered at the College of Agriculture at UMCP and the School of Agricultural Sciences at UMES. Some duplication of programs exists at both the two and four year level.

Justification: Nationally there are more than 48,000 employment openings in agriculture at the professional level each year. Only 44,000 qualified college graduates are available to fill these positions. Additionally, for each professional in agriculture, there exists a need for three to five individuals educated in aspects of agriculture beyond the secondary level. (USDA Employment Study 1986) Supplementing this is a growing number of part-time agriculturalists who are seeking education to improve their part-time agricultural enterprises. Agricultural employers indicate a severe shortage of prospective employees with practical experience and/or specific agricultural subject matter knowledge.

Agriculture, being a very diversified industry, requires a diversified education in agriculture system to provide relevant knowledge and skills for each segment of industry and business and two-year agriculture programs represent an economical delivery system. The lack of qualified personnel impacts on the productivity of numerous agricultural industries in the State of Maryland. The diversity of agriculture prevents any one individual institution from serving all the education in agriculture needs of the students in a given local community.

Recommendation twelve is the result of operational problems found by the Commission to be somewhat unique to two-year programs associated with the state's land-grant university. These problems arise from the philosophical and operational differences between a two-year technical and a four year baccalaureate degree program. Two-year programs are field/industry oriented while four year

programs are theory oriented; two-year programs emphasize teaching and demonstrations while four year programs emphasize research and publications. Two-year programs require smaller student/teacher ratios for both effectiveness and student safety. The criteria for program and faculty evaluation and resource allocation used by the University of Maryland's baccalaureate program is not appropriate to two-year agriculture in education programs. The two-year program funding process should promote all two-year programs as partners in the agricultural education programs offered at The University of Maryland and not as a competitor for College of Agriculture funds.

Students enrolled in the two-year agricultural programs at the University of Maryland complete courses of study comparable to Associate degree programs offered in Maryland's community colleges, however, they currently cannot be awarded such a degree. The unique nature of the two-year programs in agriculture at the University of Maryland dictates an exception to the current policy.

Teacher Education

Recommendations:

13. Provide a model agricultural teacher education laboratory including classroom, agricultural mechanics laboratory, and greenhouse at the University of Maryland, College Park campus. The facilities must be equipped to equal or surpass those found in public schools.

14. Provide a model teacher education agricultural mechanics laboratory at the University of Maryland, Eastern Shore campus. The facilities must be equipped to equal or surpass those found in public schools.

15. Provide state funding for a minimum of three faculty, four graduate assistants and two secretarial positions within the Department of Agricultural and Extension Education (excluding chairman) to operate an effective graduate and undergraduate agricultural teacher education program, prepare instructional materials and conduct inservice activities.

16. Provide state funding for an additional faculty member, graduate assistant and secretarial position within the Department of Agriculture at the School of Agricultural Sciences located at the Eastern Shore Campus of the University of Maryland to assist in the operation of an effective graduate and undergraduate agricultural teacher education program, prepare instructional materials and conduct inservice activities.

17. The teacher education departments at the University of Maryland, College Park and Eastern Shore be responsible for delivering a required introductory agriculture course (three credits) for elementary teacher education majors and a graduate level course for certified elementary teachers.

Situation: Teacher education in agriculture is currently offered at two locations, the University of Maryland, at College Park and the University of Maryland, Eastern Shore Campus. Both locations have inadequate facilities and insufficient personnel to properly support a quality statewide agricultural teacher education program. Low enrollments effect funding of teacher education through normal university processes. There is, however, a continuing need for quality teachers to strengthen the statewide education program in agriculture. Agricultural industries are a major consumer of agricultural teacher education graduates and compete with school systems for the most qualified graduates.

Justification: Staffing and facilities for teacher education in agriculture in Maryland must be expanded and upgraded to keep academically talented Maryland students from going out-of-state for their education and to attract quality students into the field of agricultural teacher education. Effective agriculture/agribusiness and renewable natural resources (A/A&RNR) programs throughout Maryland's public schools at all grade levels, will require an effective teacher education program capable of providing an adequate pool of highly qualified and motivated teachers. The efficient use of resources requires that model teaching facilities be developed and maintained on the University of Maryland campuses.

Support activities (inservice) for all agricultural teachers in the state is equally as important as the preparation of new teachers (preservice). Resources and administrative support for agriculture teacher education programs appear, however, to be based primarily on undergraduate enrollment and does not consider the inservice requirements of teachers in the field. The number of teacher education graduates range widely, from one to nineteen annually, thus being very cyclic in nature. Program resources tend to be allocated on the basis of short term data making it difficult to build and maintain strong continuing programs.

The College of Education does not include basic agriculture information for the undergraduate elementary education major who will be responsible for implementing the Agriculture in the Classroom program nor for the elementary teacher already employed in a school system who will be in need of a graduate level course. The faculty on the agriculture education staff is the logical choice for this requirement which will also promote cooperation between the two Colleges.

IMAGES AND PERCEPTIONS

Image of Agriculture

Recommendations:

18. An Interagency Coordinating Committee for Education in Agriculture (ICCEA) must be developed to serve as a vehicle to utilize resources of the Maryland Department of Agriculture, the Maryland State Department of Education, the Soil Conservation Service, the Department of Employment and Training, the Department of the Environment and the Department of Natural Resources. The charge to the ICCEA will include the development of newsletters, radio and television spots, promotional materials, and other public relations activities.

19. Public relations packages must be developed by the Interagency Coordinating Committee on a continual and sustaining basis to assist the public media in portraying an accurate awareness of the Maryland agricultural industry and a general public awareness campaign initiated to overcome and eliminate the negative image of agriculture.

20. A definition of agriculture appropriate to Maryland, must be adopted by the State of Maryland, to serve as a policy statement providing guidance to state agencies as well as clarifying for the general public the numerous elements that comprise Maryland agriculture. The Commission has developed a proposed definition found in the "Why Education in Agriculture" section.

Situation: One of the most perplexing situations that has plagued the agricultural industry is the highly negative image held by the general public. American agriculture is the envy of world food producers and the productivity of agriculture workers is higher than other industries in the nation. Agriculture incorporates the latest in technology and is continually at the forefront in the development and application of new knowledge. Yet, the news headlines tend to focus on the farms going through foreclosure in the Midwest and barely footnote the fact that one third of the biotechnology businesses in Maryland are developing agricultural applications.

The average Maryland citizen from blue collar worker to financial executive and from the elementary school child to the high school guidance counselor still views agriculture only as a farmer producing crops and livestock. Modern agriculture left that reality in the fifties.

Dr. Addison Hobbs, Assistant Superintendent for Vocational-Technical Education, in his testimony to the Commission stated that "I don't think Americans see agriculture when they visit a well stocked supermarket, purchase a wool sweater, play eighteen holes of golf, pick up a shrub from their local garden center, order a cord of wood for the winter, or visit a park or recreational site. But all of these involve agriculture and agriculturalists." He further stated "Beginning with a negative image of agriculture, it is small wonder that students miss the career possibilities in the new and emerging areas from golf course management to biotechnology and from forestry to agricultural sales and service. The negative image of agriculture is a major barrier to effective recruitment and increased enrollment in agricultural programs."

Justification: The image of agriculture impinges on many of the investigated issues and resultant recommendations. The inaccurate image of agriculture serves to reduce the number of students entering programs of education in agriculture, thereby curtailing the expansion of agricultural businesses and reducing the contribution of agriculture to the Maryland economy. An accurate and positive image of agriculture will serve to eliminate the barriers to entering an agricultural occupation and stimulate agricultural development in Maryland.

The Image of Programs of Education in Agriculture

Recommendations:

21. A general awareness campaign be developed by the ICCEA aimed at school administrators, guidance counselors, teachers and students to orient them to career opportunities and education programs in agriculture.

22. Courses and existing agricultural programs at all levels be revised and renamed to reflect the current reality of today's agricultural business and industry emphasizing its evolving high tech nature. The term vocational must be dropped from agricultural program titles and courses.

23. Facilities, equipment and instructional materials in programs at all levels must be evaluated for upgrading to state-of-the-art status in order to assure that a strong image is portrayed to the student as well as a quality program.

24. A statewide postsecondary scholarship program for enrollees in high school agricultural programs be developed and supported by agricultural industry and business contributions matched by state funds.

Situation: Presently the image of programs of education in agriculture, in the high schools, generally is not favorable. The programs are looked upon as terminal and not suitable for college-bound students by parents and school personnel. The average student in high school or a postsecondary institution perceives education in agriculture as non-challenging, vocational in focus, non-academic and a poor career choice. As pointed out in several testimonies, quality students with interests in agriculture often do not enroll in agricultural courses due to peer pressure that is based on inaccurate and misleading perceptions. Students enrolled in agriculture programs, without justification, are often viewed as less capable than students in other classes. Students as well as the general public hold negative perceptions of agriculture because they simply do not understand or appreciate the depth and breadth of contemporary agriculture.

Justification: The need for a positive program image is required for program viability which in turn will determine whether we can meet industry labor demands. In order to aid in dispelling negative perceptions, attempts must be made to approach the problem indirectly. The term vocational has been identified as a red flag to many students. By eliminating that problem, we will have made a giant stride to changing perceptions. Programming that would involve more academically oriented students would again be a clue to others that their perceptions were ill-conceived. Offering scholarships to students enrolled in agriculture courses at the high school level will become an incentive for those students to continue in agriculture and for others to see the bright future agricultural careers have to offer them. Pre-vocational and K-8 education that emphasizes the high tech aspects of agriculture should encourage both academically oriented and occupationally oriented students to pursue programs of education in agriculture. Improvements in both the image of agriculture and program image will go hand in hand to improve the climate for business and industry in agriculture

STANDARDS OF QUALITY

Program Standards and Specifications

Recommendation:

25. Appropriate standards for kindergarten through eighth grade Agriculture in the Classroom (AITC) programs, middle school agricultural arts programs, secondary agricultural science and technology programs and postsecondary technical agricultural programs must be developed and/or revised and implemented.

Situation: Currently there are vocational program standards for the secondary level of education in agriculture. The standards are descriptive statements developed by identified professionals and validated by numerous educators throughout the state. Elementary and postsecondary program standards on a statewide basis are nonexistent.

Justification: Quality program standards are the basis by which programs of education in agriculture may be updated statewide. The revision and development of such standards is an important first step in assuring that program graduates will be adequately educated and trained for the labor needs of Maryland agriculture.

Facility & Equipment Standards

Recommendation:

26. Facility and equipment standards for middle school agricultural arts programs, secondary agricultural science and technology programs and the designated regional technical agricultural programs at community colleges and the Institute of Applied Agriculture must be developed to meet industry standards for Maryland.

Situation: The current facility and equipment standards for the secondary level are contained in the program standards provided by the Maryland State Department of Education which are in need of updating. Facilities and equipment for quality instructional programs in agriculture are seriously lacking in postsecondary and teacher education programs.

Justification: Facility standards must reflect and project state-of-the-art technology required by today's agricultural business and industry. As we attempt to train students for an extremely scientific and high tech agriculture, the equipment needed to facilitate that training must be available to the instructor and the students. We have spoken of poor perception by students but the image which is portrayed by many of our existing program facilities and equipment at all levels can do no more than foster a negative image.

Equal Access

Recommendations:

27. All Maryland students enrolled in kindergarten through eighth grades must have access to an Agriculture in the Classroom (AITC) program aimed at stimulating their interest and understanding of the agricultural industry.

28. If a student in a local education agency wishes to participate in an agricultural program that is not located in the home high school, arrangements must be made by the local education agency to provide access to the student.

29. A statewide proactive program must be developed to recruit minority students, including non-traditional and special populations for education in agriculture and the appropriate standards must be developed to guide its implementation.

30. All community colleges must offer selected introductory agriculture courses to facilitate their student's entry into agricultural careers.

31. Designated regional community college programs and the Institute of Applied Agriculture must be financed so as to provide services to all students not exceeding the cost of attending their local postsecondary institution.

Situation: Educational opportunities in agriculture are not available to all students. Today many students are directed away from agriculture courses especially in high schools if the student has been earmarked "college-bound". In many of the school systems in Maryland, programs are only available in a limited number of high schools for students interested in agriculture. In one LEA there are no programs available in agriculture. In these situations, the students do

not have equal access if they must provide their own transportation to a distant school offering the desired program. Significant differences in tuition costs deny some students equal access to the postsecondary program of their choice. Education in agriculture should be available to all students regardless of race, religion, sex, handicap or place of residence. Minorities are significantly underrepresented in agricultural programming. A proactive campaign must be initiated to recruit minority students into agricultural programs.

Justification: Equal access is a major goal of the Division of Vocational-Technical Education within the Maryland State Department of Education. Less than six percent of the student population in secondary agricultural programs is black and only thirty-four percent female. Numerous inequitable situations continue to exist where agricultural instruction is not available or easily accessible by individuals desiring such instruction including urban, suburban and rural populations, as well as minority and special populations. Those inequities must be remedied.

INSTRUCTIONAL INFORMATION AND COMMUNICATION SYSTEMS

Printed Communications

Recommendations:

32. Closer working relationships must be developed among the Maryland Department of Agriculture, the University of Maryland, the Community Colleges in Maryland and the Maryland State Department of Education' Division of Vocational Technical Education to make agricultural resource materials (publications, tapes and films) available for use by the total education in agriculture delivery system.

33. The Interagency Coordinating Committee must develop and distribute a bi-monthly newsletter, funded by special appropriations, with a theme of "Agriculture in Our Lives", and targeted to K-12 teachers for use by students in social studies, science and agricultural courses.

Situation: The use of printed materials for education in agriculture programs is of paramount importance. The ever changing agricultural sector requires that up-to-date information be presented in the classroom and laboratories. However, this is a monumental task and is not accomplished through use of traditional textbooks which are unavoidably out-of-date when published.

Justification: All individuals in agricultural programs should have printed materials that are relevant and up-to-date. The availability of material appropriate to Maryland and focusing on agriculture as an industry is needed for general use in the school system to make all students aware of the importance of agriculture to the strength of the nation and the quality of everyday life.

Electronic and Telecommunications

Recommendations:

34. A Maryland Computer Network for Education in Agriculture must be established to allow for quick and efficient communication between the Division of Vocational-Technical Education of the State Department of Education, the secondary and postsecondary agricultural programs and the Teacher Education departments of the University of Maryland.

35. A telecommunications line must be installed in each education in agriculture program on the secondary and postsecondary levels to facilitate utilization of the proposed computer network and to allow access to suitable databases.

36. The Interagency Coordinating Committee must coordinate efforts to utilize Cable TV and Public Television channels to promote agriculture and provide instructional programs for pre-school to adult populations.

Situation: In the information age of today, computers are an essential part of every business and industry. Due to the nature of education in agriculture in the State of Maryland, communication via electronic means is absolutely necessary. Approximately fifty percent of the high school vocational agricultural programs have access to microcomputers or have microcomputers in their departments in 1987. This percentage should be one hundred.

Justification: The ability to communicate electronically through the written word is a current expectation in today's work world. The next twenty years will see the complete conversion of our information communication system to an electronic basis. A system is needed that is state-of-the-art in education in agriculture and that is efficient, cost effective and capable of opening an unlimited number of doors to the gathering of information. We must follow the lead of 25 other states (at this writing) and implement such a network.

PROGRAM COMPONENTS

Extended Day & Year Activities

Recommendations:

37. Additional compensation or release time must be provided to offset the extended day time demands placed on education in agriculture teachers at the secondary level.

38. Agricultural programs at the secondary level must be conducted on a twelve month basis with full-time teachers to staff them. Funds to provide 75% of the cost of twelve month employment of teachers be made available via new and earmarked state funds. Such contracts must call for a minimum of thirty 8-hour days of teacher service between the closing of schools in June and reopening in August or September.

Situation: Agricultural programs at the secondary level include the three components of classroom/laboratory, supervised occupational experience (SOE) and the FFA student organization (Future Farmers of America) as integral parts of instruction. Many FFA and SOE activities are conducted after traditional school hours, on weekends and holidays, and during the summer months. Currently the majority of high school agricultural teachers are not receiving adequate remuneration for this aspect of their jobs. Agriculture is a year-round enterprise and many aspects of agricultural enterprises occur during the summer months. In order to provide for timely and adequate instruction, it is necessary for teachers to be employed on a twelve month basis. Curriculum development is another aspect of the agricultural program which is in need of constant revision and updating and is an activity that can best take place during the summer period. Management and supervision of land laboratories, animals and greenhouses is a year-round activity which includes evenings, weekends, summers and holidays.

Justification: Without provisions for extended day and extended year activities, the quality of education in agriculture programs is significantly diminished. The positive benefits of additional teacher contact time with students more than offsets the additional costs involved.

Articulation

Recommendation:

39. Establish and implement a plan for the articulation of education in agriculture programs at all levels including:
    a. pre-school agriculture awareness efforts
    b. elementary agriculture in the classroom programs
    c. middle school agricultural arts programs
    d. secondary agriculture programs
    e. community college technical and transfer programs
    f. University of Maryland two-year agriculture programs
    g. University of Maryland four-year agriculture programs

Situation: At present there is little if any articulation occurring below the ninth grade level. Some high schools have articulation agreements with a few community colleges. There are articulation agreements in existence between The University of Maryland and Maryland's Community Colleges as well as the Institute of Applied Agriculture.

Justification: A planned progression from one level of education to the next is essential to guarantee quality education in agriculture. Economics and common sense dictate that articulation of agriculture instruction at all levels should be a high priority. State and local government and educational agencies will benefit greatly from a cooperative effort to facilitate the articulation process.

Student Organizations

Recommendations:

40. Chapters of the Postsecondary Agricultural Student Organization (PAS) must be started at each of the state's postsecondary agricultural institutions where two-year agricultural programs are offered.

41. The Maryland FFA be encouraged to continue its study of FFA activities and to make enhancements and improvements in light of changes in the agricultural industry and the student population.

Situation: The Future Farmers of America (FFA) of the State of Maryland boasts a membership of 1,941 in 1987, however, this membership declined over the previous years from a membership of 3,669 in 1981. The FFA is an integral part of agricultural education programs in the high schools and middle schools. The organization provides for student motivation, leadership development and personal growth. The need for greater integration of urban and minority students into FFA activities is a current problem. The national Postsecondary Agricultural Student Organization (PAS) serves postsecondary students. However, currently there are no chapters within the state.

Justification: Student organizations provide the motivation and inspiration needed by some students to excel in school. FFA, being an integral part of agricultural programs, should be available to all students. The FFA and PAS organization provides experiences not available in the regular classroom and laboratory settings. Employers routinely report that they are seeking employees with the types of leadership, attitudinal, and citizenship skills developed in the FFA and PAS.

Occupational Experience Programs

Recommendation:

42. A statewide program at the Institute of Applied Agriculture to coordinate the support of occupational work experience programs by agricultural business and industry must be developed to aid in the expansion of the types and durations of placements for high school students, including more school site occupational experience options, to facilitate the improvement and enhancement of this component.

Situation: Students studying agriculture at the high school level and in the Institute of Applied Agriculture and in some community college programs are expected to complete an occupational experience program in their selected area of agriculture. This placement or entrepreneurial experience complements instruction by allowing the student to apply knowledges and skills gained in the classroom which gives the student an advantage in the job market. This requirement is at times difficult to meet with the current student clientele.

Justification: Supervised occupational experience (SOE) is essential for the complete development of a student's skills. The opportunity to apply acquired knowledge and skills increases the success of the graduate as an effective employee in the agricultural industry.

SUPPORT SYSTEMS

Administration, Supervision, Guidance and Counseling

Recommendations:

43. A three-day seminar be conducted by the Program Specialist in Agriculture in the Division of Vocational-Technical Education specifically designed for administrators, supervisors and guidance counselors of agricultural programs at the secondary level. This seminar will be offered annually with requirement of attendance every third year.

44. A guidance and counseling professional for agricultural majors be established and filled by a certified counselor at each of the designated postsecondary regional agricultural programs.

Situation: Administrators and supervisors vary considerably in their understanding of the philosophy, purpose, goals and objectives of agricultural education. The need for administrators and supervisors to thoroughly understand the concept of education in agriculture is essential to the success of the program. Guidance and counseling activities at the secondary level appear to de-emphasize agriculture as a viable career choice. Testimony by counselors and

administrators indicates this is attributed to a lack of understanding regarding the careers and educational opportunities available in agriculture on the part of the guidance and counseling personnel. College-bound students who wish to enroll in agricultural courses are often advised not to do so. Numerous testimonies underscored the notion that the depth and breadth of agricultural courses and their appropriateness to the program of a college-bound agriculture major have eluded the counselor.

Justification: Guidance counselors were noticeably underrepresented among those providing testimony to the Commission. The lack of knowledge and understanding by guidance counselors and administrators about the agricultural industry and its associated career opportunities is having a dramatic effect on numbers of students enrolling in agricultural programs at all levels.

SERVICE SYSTEMS

Maryland State Department of Education, Maryland Department of Agriculture, Department of Natural Resources, Department of the Environment, Department of Employment and Training and the Soil Conservation Service

Recommendations:

45. A permanent Commission on Education in Agriculture should be established to serve as a facilitating and advisory group for the elementary Ag in the Classroom Program, the middle school Agricultural Arts Program, the secondary Agricultural Science and Technology Program, and the Two-Year Postsecondary Technical Agriculture Program. The current appointments of the Commission on Education in Agriculture should be extended to oversee the implementation of the recommendations of this report. The current representation should be expanded to include a representative of the Department of Natural Resources, the Department of the Environment, the Department of Employment and Training and the Soil Conservation Service. The Program Specialist in Agriculture in The Maryland State Department of Education's Division of Vocational-Technical Education should serve as staff for the permanent Commission with clerical support provided in conjunction with the AITC program. The Commission on Education in Agriculture members should be appointed by the Governor and should serve three-year staggered terms. The Commission should issue an annual report on the status of Maryland education in Agriculture and formulate policy for the Governor's High Schools for Agricultural Sciences.

46. The Interagency Coordinating Committee will produce and distribute statewide a handbook on agricultural career opportunities, associated educational requirements, agricultural labor projections and a directory of available educational programs in Maryland. The proposed permanent Commission on Education in Agriculture will serve in an advisory role to the coordinating committee.

Situation: The existing cooperation of these State and Federal agencies with education in agriculture in Maryland has been sporadic. Agency efforts in assisting both students and educators with education in agriculture programs has not been effective. As noted in public response, the current Commission on Education in Agriculture has already made a valuable contribution in turning the attention of Maryland education in agriculture to new approaches in dealing with difficult issues.

Justification: Each of these State and Federal agencies have unique resources and can be actively involved on a continuous basis to ensure quality education in agriculture that reflects the kinds of agriculture found in the State of Maryland. Each agency would benefit both directly and indirectly from such cooperative efforts. A permanent Commission on Education in Agriculture for the State of Maryland would serve to facilitate the implementation of the Maryland Model for Education in Agriculture.

Agricultural Business and Industry

Recommendation:

47. A separate program advisory committee representative of area agricultural enterprises must be established for each program in each high school and postsecondary two-year program.

Situation: Many high school education in agriculture programs have existing ties to local agricultural business and industry. Some two-year postsecondary programs also maintain close relationships with appropriate agricultural industry associated with their program. Currently such ties to the agricultural business and industry are not structured in a formal manner to facilitate maximum effectiveness.

Justification: Education in agriculture in Maryland has always been based on the needs of agricultural business and industry. In order to continue this tradition and to improve upon the quality of education in agriculture that the students receive, close working relationships with agricultural production, business and industry is necessary.

PERSONNEL AND STAFFING

Local Education Agency (LEA) Staffing

Recommendation:

48. An initial staff position for each high school program in agriculture be provided irrespective of the number of students in a program. A minimum of four agricultural classes must be offered irrespective of number of students enrolled. Additional staff positions must be added when student contact hours in agriculture exceed 100 hours per instructor. New and earmarked state funds be appropriated to provide 25 percent of the cost of adding secondary staffing to meet the 100 student contact hour requirement.

Situation: Most local education agency staffing is based on a teacher/pupil ratio. School administrators are not given a choice in this matter. The number of students per teacher is based on a local determination. As student numbers drop below that figure, classes are eliminated. It is extremely difficult to maintain a programatic thrust when classes within the options are dropped due to low enrollment. Enrollment problems become more prevalent as students move into the more advanced courses in a program.

Justification: Training programs cannot exist if advanced classes are periodically being dropped because of low enrollments. Students entering programs should have assurance that they will be able to finish. The responsibilities of an agricultural instructor include the components of the student organization, the

FFA, and the supervised work experience program for each student. These two components are part of the curriculum and must be accomplished to insure that the student receives the entire education in agriculture experience. Current enrollments do not reflect the importance of the agricultural programs. We must continue education in agriculture regardless of class size.

State Staffing

Recommendations:

49. Two full-time positions in agriculture be placed in the State Department of Education in the Division of Vocational-Technical Education; 1 Program Specialist and 1 Youth Organization Specialist.

50. Additional secretarial and clerical support be assigned to the Program Specialist and Youth Organization Specialist.

51. State funding must be provided for one staff line (one position for a FFA Projects Consultant) with clerical support in the Institute of Applied Agriculture to supervise and coordinate competitive and leadership events and other assigned activities under the direction of the Maryland State FFA Advisor and Executive Secretary.

Situation: Staffing for education in agriculture at the Division of Vocational-Technical Education within the State Department of Education includes a full-time Program Specialist in Agriculture position and a half-time FFA Executive Secretary position. Testimony regarding the inordinate amount of time spent by the two individuals currently holding these positions in attempting to fulfill their responsibilities is not in line with realistic expectations.

Justification: With the number and diversity of agricultural programs and the geography of the State of Maryland, one and one-half time specialists cannot possibly meet the needs. Agricultural programs, especially today, are in need of additional supervision and assistance but the specialists are not available to teachers nor local directors, as needed. To provide quality education in agriculture programs which are accessible to all students and delivered efficiently, sufficient staff at the state level must be furnished for coordination and supervision of education at all levels.

PROFESSIONAL AND TECHNICAL INSERVICE

Agricultural Instructional Personnel

Recommendation:

52. Inservice standards must be established and implemented by the Maryland State Department of Education, Division of Vocational-Technical Education. Increased funding coordinated by the Program Specialist for Agriculture at the Division of Vocational-Technical Education must be provided for continuing technical inservice of education in agriculture teachers at the middle school and secondary level that closes the widening gap between teacher knowledges and skills and changes in agricultural technology. In addition, annual indepth inservice in the high tech areas of agriculture must be coordinated by the Program Specialist in Agriculture to educate teachers and allow for the development of new secondary program options.

Situation: Inservice needs of the agricultural instructors on the secondary level are addressed through Winter Technical Workshops and Annual Summer Workshops. Indepth technical inservice has been provided on a limited basis and other opportunities have been made available in some counties. Most opportunities are limited due to lack of release time for teachers and/or the availability of substitute pay. The postsecondary instructors are provided with very few opportunities to upgrade technical skills unless it is accomplished on their own.

Justification: The newer areas of agriculture are highly technical and it is absolutely essential that teachers receive the latest in inservice training for these areas. Teachers teach in areas where they are knowledgeable and teachers must be inserviced in the new and emerging areas of agriculture if they are to conduct programs in these areas.

Elementary and Middle School Ag in the Classroom (AITC) Teachers:

Recommendation:

53. Standards must be established and implemented by the K-8 Professional Coordinator to provide for inservicing of elementary AITC teachers regarding appropriate content for the Agriculture in the Classroom Program and funding for this new general agricultural inservice must be provided.

Situation: Currently inservice in agricultural subject areas is not available to teachers who will be delivering agriculture in the classroom instruction in the future. While a few teachers now provide such instruction in a few local education agencies, they must acquire the necessary training and instructional materials independently.

Justification: The job of infusing education in agriculture into the elementary curricula will not be accomplished unless training is provided to assist elementary teachers in completing the task. In the case of the diverse and complex scope of agriculture, substantial inservicing will be needed for individuals who currently do not possess such knowledge.

OVERCOMING EXTERNAL OBSTACLES

Reduced Resources

Recommendation:

54. The State provide new funds earmarked for maintaining and improving secondary programs of education in agriculture.

Situation: Funding received from Federal sources for vocational program maintenance have been substantially reduced which places the burden of funding such programs on the local educational agencies. Currently, less than 10 percent of the program costs are borne by Federal sources. Given the high relative cost of vocational programs it is small wonder that there is little enthusiasm for maintaining or expanding current education in agriculture programs at the secondary level.

Justification: Secondary agriculture programs are relatively high cost programs to maintain and operate. Local education agencies who attempt to maintain such programs for a declining student population will need State assistance to assure a continuing flow of graduates to meet increasing labor demands in agriculture.

Declining School Enrollments

Recommendation:

55. Programs must be maintained during the down cycle of the secondary and postsecondary school populations to retain quality education in agriculture programs, therefore, unrealistic expectations for class size must be relinquished during these times.

Situation: There are reduced numbers of students enrolling in high schools nationwide. This reduction in numbers is evident in all subject matter areas. However, the elective programs are hard hit. On the postsecondary level, the number of 18 year-old people going to college is also declining. The competition for these individuals is intense.

Justification: To augment the enrollments of classes focusing on education in agriculture, the programs must be made attractive to students regardless of their academic ability levels and their backgrounds. It is also detrimental to the quality and continuity of an agricultural program to open and close courses and programs. Recruitment of young people into agricultural programs is essential.

Increasing Graduation Requirements

Recommendation:

56. Semester agricultural classes or a combination thereof as specified in the Maryland Model for Education in Agriculture must be acceptable for science and math credits and must be scheduled to allow students on a college-bound track to fit them into their course load.

Situation: With many school systems requiring 18 credits of specified courses to graduate from high school today, the typical student cannot fit electives into their schedule. The students have little chance, if any, to choose the courses they would like to take. This not only puts the average student at a disadvantage but the "college-bound" student has even less of a chance to pursue education in agriculture which is not specified for state or local education agencies graduation requirements.

Justification: To increase the availability of education in agriculture to all students as the graduation requirements accumulate, options must be developed to alleviate conflicting circumstances that are unfair to the student. An exposure to education in agriculture at the secondary level is highly desirable for continuing onto postsecondary education in agriculture.

RELATED ISSUES

Related Issues

Recommendations:

57. An awareness campaign must be developed and directed toward guidance counselors, parents and students indicating that to gain entrance into Colleges of Agriculture they will not find it necessary to elect a foreign language in high school as it is not required for admission to institutions offering agricultural degrees in the State of Maryland.

Situation: By 1990, the citizens of Maryland who are interested in attending a public college or university in Maryland, except for the University of Maryland system, must have taken two units of a foreign language in high school as part of the admission criteria. This requirement in combination with the increasing graduation requirements for high school practically eliminates any chance a "college-bound" student has for participating in any education in agriculture at the high school level. By limiting the exposure these students have to agriculture in the high schools, the tendency for them to major in agriculture on the postsecondary level is greatly diminished. There is a strong tendency on the part of counselors, administrators, students and parents to draw the incorrect conclusion that a foreign language is required for admission to agricultural colleges in Maryland.

Justification: Individuals with education in agriculture beyond the high school level are in demand, especially in areas such as agricultural engineering, agricultural law, agricultural teaching and agricultural finance. The United States Department of Agriculture predicts that by the mid-1990's, 35 percent of their professionals will be retiring, leaving numerous vacancies for individuals with baccalaureate degrees or higher to fill. Students need to be encouraged to enter these career paths and not be hindered by poorly understood college entrance requirements. Foreign languages are not required for admission to Colleges of Agriculture across the nation.

58. The University of Maryland must continue to evaluate and update instructional programs and facilities for agriculture to assure a continued quality education at the baccalaureate and advanced degree levels.

Situation: An unusually high proportion of Maryland students are leaving the state to pursue undergraduate education in agriculture. Testimony by students and others indicated a need for the University of Maryland to assess their agricultural instructional programs. A review and reorganization of instructional programs is currently occurring at The University of Maryland, College Park Campus. Since a review of the University's current programs was felt to be outside the charge given to the Commission there was no attempt to address this aspect of the education in agriculture delivery system.

Justification: The four-year and professional agricultural programs in the University of Maryland System is a part of the total education in agriculture delivery system and is vital to maintaining a viable agricultural industry in Maryland.

59. Establish a policy that upon the petition of 350 registered voters within a Secondary School District, the program of Agriculture/Agribusiness and Renewable Natural Resources (AA/RNR) specified by the voters will be implemented by the local education agency in the specified secondary school.

Situation: Currently, in many schools the principal has the responsibility of deciding what programs are offered and which classes will be dropped. Many of these decisions are based on inaccurate agricultural labor projections, which describes the need as non-existent. Several programs in agriculture have been dropped in the past in this manner.

Justification: Due to the diverse nature of agriculture and its economic impact on a community, the citizens should have some power in requesting what should be taught in the area high school regarding education in agriculture.

60. An Agriculture in the Classroom Foundation comprised of representatives from the diverse industry of agriculture should be established to raise funds for curriculum development, printing, and program development with schools. State funds must be sought to provide administrative and staff support which is shown in Recommendation Number Six calling for the hiring of a kindergarten through eighth grade agriculture coordinator.

Situation: In the past ten years attempts have been made to establish an Agricultural Awareness Component in the K-8 curriculum. To date, that effort has not resulted in the establishment of comprehensive quality of instruction in middle and elementary schools in Maryland.

Justification: The introduction of the new component of Agriculture in the Classroom will require that a funding mechanism be established. In order to diversify the funding base, outside sources must be found to supplement funds provided through traditional channels.

FIVE-YEAR IMPLEMENTATION-FUNDING PLAN

The five year implementation-funding plan that follows was designed to provide the reader with a quick but comprehensive index to the recommendations of the Commission. A short title is identified along with the recommendation number to allow easy reference to the details of the previous Issues and Recommendations section. The assigned agency along with the implementing body is identified to indicate those who would be responsible for implementation. Specific Action to take place is provided for each of the next five fiscal years and recommended funding levels are also identified by fiscal year. Funding options are suggested and where appropriate special notes of explanation are added. The necessity to be both specific and brief dictated that an abbreviated format for presentation be utilized. In addition to that format, two summary tables are provided to give the reader an overview of the funding patterns and the first year action specified for those recommendations not requiring new funding.

Rec. No: 1 Develop Maryland Model for Ed in Ag — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Contract to Consulting Group — 5-YR Funding: 90,000

FY 88 Action: DVTE Develop Request for Proposal	FY 88 Funding:	0
FY 89 Action: DVTE Contract & Begin Model Development	FY 89 Funding:	20,000
FY 90 Action: Complete MD Model-Begin Curriculum Dev	FY 90 Funding:	30,000
FY 91 Action: Continue to Develop Curriculum Units	FY 91 Funding:	30,000
FY 92 Action: Disseminate & Implement Curriculum Units	FY 92 Funding:	10,000

Funding Option 1: Seek Foundation Grant
Funding Option 2: State Budget Item
Funding Option 3: MSDE & MDA Jointly Fund

Rec. No: 2 Develop Ag Employment Data System — Funding Required: Yes
Assigned Agency: Department of Employment & Training
Implementing Body: Contract to Consulting Group — 5-YR Funding: 60,000

FY 88 Action: DET Develop Implementation Plan	FY 88 Funding:	0
FY 89 Action: DET Seek Funding & Begin Development	FY 89 Funding:	5,000
FY 90 Action: Contract for System Development	FY 90 Funding:	25,000
FY 91 Action: Complete Development-Begin Implementing	FY 91 Funding:	25,000
FY 92 Action: Complete Implementation	FY 92 Funding:	5,000

Funding Option 1: Seek Foundation Grant
Funding Option 2: State Budget Item
Funding Option 3: MSDE, DET, & MDA Jointly Fund

Rec. No: 3 New Agriculture Programs and Options — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 100,000

FY 88 Action: DVTE Develop Plan of Action	FY 88 Funding:	0
FY 89 Action: Award Prog Incentive Grants-Sec-Postsec	FY 89 Funding:	25,000
FY 90 Action: Award Prog Incentive Grants-Sec-Postsec	FY 90 Funding:	25,000
FY 91 Action: Award Prog Incentive Grants-Sec-Postsec	FY 91 Funding:	25,000
FY 92 Action: Award Prog Incentive Grants-Sec-Postsec	FY 92 Funding:	25,000

Funding Option 1: State Budget Item
Funding Option 2: Note: 2 Annual Grants @ 5,000/Grant-Postsecondary
Funding Option 3: Note: 5 Annual Grants @ 3,000/Grant for Secondary

Rec. No: 4 MD Ag Placement & Follow-Up Program — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Institute of Applied Agriculture — 5-YR Funding: 76,000

FY 88 Action: IAA Seek Grant & Develop Plan of Action	FY 88 Funding:	0
FY 89 Action: IAA Begin Initial Development	FY 89 Funding:	10,000
FY 90 Action: IAA Initiate Dev of Survey & Placement	FY 90 Funding:	18,000
FY 91 Action: IAA Initiate Dev of Follow-Up System	FY 91 Funding:	18,000
FY 92 Action: IAA Implement Placement-Follow-up System	FY 92 Funding:	30,000

Funding Option 1: Seek Foundation Grant
Funding Option 2: State Budget Item
Funding Option 3: Perkins Voc Educ Act or JTPA Federal Funding

Rec. No: 5 Ag in the Classroom (AITC) Program — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Division of Instruction — 5-YR Funding: 360,000

FY 88 Action: DI Develop AITC Program Plan of Action	FY 88 Funding:	0
FY 89 Action: DI Dev Instruct Mats & Prgm Components	FY 89 Funding:	30,000
FY 90 Action: DI Pilot Test AITC Programs in 3 LEAs	FY 90 Funding:	80,000
FY 91 Action: Refine & Print Inst Mats for Implement	FY 91 Funding:	150,000
FY 92 Action: Implement AITC Program in All LEAs	FY 92 Funding:	100,000

Funding Option 1: State Budget Item
Funding Option 2: Partial Development Funding Other Sources
Funding Option 3: Partial Funding from AITC Foundation

Rec. No: 6 K-8 Agriculture (AITC) Coordinator — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Division of Instruction — 5-YR Funding: 260,000

FY 88 Action: Legislature Add Staff-Clerical Position	FY 88 Funding:	0
FY 89 Action: DI Fill Staff & Clerical Position	FY 89 Funding:	65,000
FY 90 Action: DI Continue Staff & Clerical Position	FY 90 Funding:	65,000
FY 91 Action: DI Continue Staff & Clerical Position	FY 91 Funding:	65,000
FY 92 Action: DI Continue Staff & Clerical Position	FY 92 Funding:	65,000

Funding Option 1: State Budget Item
Funding Option 2: Note: Halftime Clerical Support K-8 Coordinator
Funding Option 3: Note: Halftime Clerical Support ICCEA & Perm Comm

Rec. No: 7 Middle School Agri Arts Program — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Ag Arts Program	FY 88 Funding:	0
FY 89 Action: DVTE & LEA Develop Ag Arts Curriculum	FY 89 Funding:	0
FY 90 Action: Implement Min of One Program Per Year	FY 90 Funding:	0
FY 91 Action: Implement Min of One Program Per Year	FY 91 Funding:	0
FY 92 Action: Implement Min of One Program Per Year	FY 92 Funding:	0

Funding Option 1: Initial Program funding - Carl Perkins Vo-Ed Act
Funding Option 2: Continued Funding After Third Year from LEA
Funding Option 3: None

Rec. No: 8 Student Occupational Interest Surveys — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Instruction & Div of Vo-Tech — 5-YR Funding: 0

FY 88 Action: DI & DVTE Develop State Plan of Action	FY 88 Funding:	0
FY 89 Action: LEAs Plan for Implementation	FY 89 Funding:	0
FY 90 Action: LEAs Begin Implementation	FY 90 Funding:	0
FY 91 Action: LEAs Continue Implementation	FY 91 Funding:	0
FY 92 Action: LEAs Continue Implementation	FY 92 Funding:	0

Funding Option 1: LEAs Fund Cost of Occupational Interest Survey
Funding Option 2: None
Funding Option 3: None

Rec. No: 9 Agricultural Science & Tech Program — Funding Required: No
Assigned Agency: MSDE-Div of Vocational-Technical Educ
Implementing Body: Local Education Agencies — 5-YR Funding: 0

FY 88 Action: Legislature Provide for New Program	FY 88 Funding:	0
FY 89 Action: Prog & Options Dev in Model, LEA Select	FY 89 Funding:	0
FY 90 Action: LEAs Implement Program Options	FY 90 Funding:	0
FY 91 Action: LEAs Implement Program Options	FY 91 Funding:	0
FY 92 Action: LEAs Implement Program Options	FY 92 Funding:	0

Funding Option 1: Local Education Agencies Fund Implementation
Funding Option 2: AST Program Implemented Concurrent With MD Model
Funding Option 3: None

Rec. No: 10 Governor's High Schools of Ag Sciences — Funding Required: Yes
Assigned Agency: Governor's Program Office
Implementing Body: Permanent Commission on Educ in Ag — 5-YR Funding: open

FY 88 Action: Governor Appoints Perm Comm as Study Team	FY 88 Funding:	0
FY 89 Action: Permanent Commission Conducts Study	FY 89 Funding:	0
FY 90 Action: Preliminary Planning for First Site	FY 90 Funding:	open
FY 91 Action: Request for Legislative Appropriation	FY 91 Funding:	open
FY 92 Action: Initiate Establishment First High School	FY 92 Funding:	open

Funding Option 1: open
Funding Option 2: open
Funding Option 3: open

Rec. No: 11 Regional Postsecondary Ag Programs — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: SBCC & Univ of Maryland Regents — 5-YR Funding: 0

FY 88 Action: SBCC & DVTE & UM Adopt Regional Ag Prgm	FY 88 Funding:	0
FY 89 Action: Two New Postsecond Prgrms Est Per Year	FY 89 Funding:	0
FY 90 Action: Two New Postsecond Prgrms Est Per Year	FY 90 Funding:	0
FY 91 Action: Two New Postsecond Prgrms Est Per Year	FY 91 Funding:	0
FY 92 Action: Two New Postsecond Prgrms Est Per Year	FY 92 Funding:	0

Funding Option 1: New Prgm Implmntion Funded via Regular Channels
Funding Option 2: Incentive Funds via New State Funds (See #3)
Funding Option 3: None

Rec. No: 12 UM Two Year Ag Program Policies — Funding Required: No
Assigned Agency: The University of Maryland
Implementing Body: The University of Maryland — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Policy Change	FY 88 Funding:	0
FY 89 Action: None	FY 89 Funding:	0
FY 90 Action: None	FY 90 Funding:	0
FY 91 Action: None	FY 91 Funding:	0
FY 92 Action: None	FY 92 Funding:	0

Funding Option 1: Budget Funded Through Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 13 UMCP Model Teacher Educ Facilities — Funding Required: Yes
Assigned Agency: The University of Maryland
Implementing Body: UMCP College of Agriculture — 5-YR Funding: 680,000

FY 88 Action: UMCP Dvlp 3-Phase Model Facility Plan	FY 88 Funding: 0
FY 89 Action: Architects Dvlp Plan for Model Facility	FY 89 Funding: 30,000
FY 90 Action: UMCP Implement Classroom Facility Phase	FY 90 Funding: 150,000
FY 91 Action: UMCP Implement Ag Mech Equipment Phase	FY 91 Funding: 200,000
FY 92 Action: UMCP Implement Greenhouse Phase	FY 92 Funding: 300,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 14 UMES Agricultural Mechanics Facility — Funding Required: Yes
Assigned Agency: The University of Maryland
Implementing Body: UMES School of Agricultural Sciences — 5-YR Funding: 580,000

FY 88 Action: UMES Dvlp Plan for Ag Mech Facilities	FY 88 Funding: 0
FY 89 Action: Architects Dvlp Plan for Facilities	FY 89 Funding: 30,000
FY 90 Action: Initiate Building Phase of Facilities	FY 90 Funding: 450,000
FY 91 Action: Initiate Equipment Phase of Facilities	FY 91 Funding: 100,000
FY 92 Action: None	FY 92 Funding: 0

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 15 UMCP Increased Teacher Education Staff — Funding Required: Yes
Assigned Agency: The University of Maryland
Implementing Body: UMCP College of Agriculture — 5-YR Funding: 600,000

FY 88 Action: UMCP Dvlp Long Term Teacher Educ Plan	FY 88 Funding: 0
FY 89 Action: Perm Comm to Review and Approve Plan	FY 89 Funding: 0
FY 90 Action: Add One Faculty, One Grad Asst, One Sec	FY 90 Funding: 100,000
FY 91 Action: Add One Faculty and Two Grad Assistants	FY 91 Funding: 200,000
FY 92 Action: Add One Faculty, One Grad Asst, One Sec	FY 92 Funding: 300,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 16 UMES Increased Teacher Education Staff — Funding Required: Yes
Assigned Agency: The University of Maryland
Implementing Body: UMES School of Agricultural Sciences — 5-YR Funding: 300,000

FY 88 Action: UMES Dvlp Long Term Teacher Educ Plan	FY 88 Funding: 0
FY 89 Action: Perm Comm to Review and Approve Plan	FY 89 Funding: 0
FY 90 Action: Add One Faculty, One Grad Asst, One Sec	FY 90 Funding: 100,000
FY 91 Action: Continue Staffing	FY 91 Funding: 100,000
FY 92 Action: Continue Staffing	FY 92 Funding: 100,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 17 Intro Ag Courses for Elem Ed Majors — Funding Required: No
Assigned Agency: The University of Maryland
Implementing Body: Dept of Agricultural & Extension Educ — 5-YR Funding: 0

FY 88 Action: Legislature Provide Elem Ed Ag Courses	FY 88 Funding:	0
FY 89 Action: UMCP & UMES Dev 3-Cr BS & Grad Courses	FY 89 Funding:	0
FY 90 Action: Grad & Undergrad Ag Offered to Elem Ed	FY 90 Funding:	0
FY 91 Action: Grad & Undergrad Ag Offered to Elem Ed	FY 91 Funding:	0
FY 92 Action: Grad & Undergrad Ag Offered to Elem Ed	FY 92 Funding:	0

Funding Option 1: Funding Provided Through Regular Channels
Funding Option 2: Note: 3-Cr Ag Course Required For Elem Ed Majors
Funding Option 3: Note: Grad Ag Course Offered for Elem Ed Teachers

Rec. No: 18 Interagency Coord Comm on Educ in Ag — Funding Required: Yes
Assigned Agency:
Implementing Body: Permanent Commission on Educ in Ag — 5-YR Funding: 10,500

FY 88 Action: Legislature Provide for ICCEA	FY 88 Funding:	0
FY 89 Action: Joint Agencies Develop ICCEA Plan	FY 89 Funding:	1,500
FY 90 Action: Interagency Coorindating Comm Operation	FY 90 Funding:	3,000
FY 91 Action: Interagency Coorindating Comm Operation	FY 91 Funding:	3,000
FY 92 Action: Interagency Coordinating Comm Operation	FY 92 Funding:	3,000

Funding Option 1: State Budget Item or Shared Agency Funding
Funding Option 2: Note: Clerical Support at MSDE/DI in Conjunction
Funding Option 3: with AITC Prog & Perm Comm-See Recs 5 & 45

Rec. No: 19 Develop Public Relations Package — Funding Required: Yes
Assigned Agency: Maryland Department of Agriculture
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 35,000

FY 88 Action: MDA Identify Areas of Need	FY 88 Funding:	0
FY 89 Action: MDA Initiate Development of Materials	FY 89 Funding:	5,000
FY 90 Action: ICCEA Develop Public Relations Package	FY 90 Funding:	10,000
FY 91 Action: ICCEA Disseminate PR Package	FY 91 Funding:	10,000
FY 92 Action: ICCEA Disseminate PR Package	FY 92 Funding:	10,000

Funding Option 1: State Budget Item
Funding Option 2: Industry Sponsored Campaign
Funding Option 3: None

Rec. No: 20 State Definition of Agriculture — Funding Required: No
Assigned Agency: Maryland Department of Agriculture
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Definition of Ag	FY 88 Funding:	0
FY 89 Action: Perm Comm Review Possible Applications	FY 89 Funding:	0
FY 90 Action: ICCEA Develops Useage Guidelines	FY 90 Funding:	0
FY 91 Action: Useage Guidelines Adopted By Agencies	FY 91 Funding:	0
FY 92 Action: None	FY 92 Funding:	0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 21 Develop Educator Ag Awareness Program — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 7,500

FY 88 Action: Legislature Provide for Awareness Prog	FY 88 Funding:	0
FY 89 Action: ICCEA Develops Plan of Action	FY 89 Funding:	0
FY 90 Action: ICCEA Implements Ag Awareness Campaign	FY 90 Funding:	2,500
FY 91 Action: ICCEA Implements Ag Awareness Campaign	FY 91 Funding:	2,500
FY 92 Action: ICCEA Implements Ag Awareness Campaign	FY 92 Funding:	2,500

Funding Option 1: State Budget Item
Funding Option 2: Industry Sponsored Campaign
Funding Option 3: None

Rec. No: 22 Revising Education in Ag Terminology — Funding Required: No
Assigned Agency: MSDE-Div of Vocational-Technical Educ
Implementing Body: Local Education Agencies — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Policy Change	FY 88 Funding:	0
FY 89 Action: DVTE Develop & Disseminate Guidelines	FY 89 Funding:	0
FY 90 Action: LEAs Implement Appropriate Guidelines	FY 90 Funding:	0
FY 91 Action: None	FY 91 Funding:	0
FY 92 Action: None	FY 92 Funding:	0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 23 Evaluating Ed in Ag Program Resources — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Evaluation Plan	FY 88 Funding:	0
FY 89 Action: DVTE Dvlp & Implement Resource Eval Plan	FY 89 Funding:	0
FY 90 Action: DVTE Implement Res Eval-LEAs Upgrade Res	FY 90 Funding:	0
FY 91 Action: DVTE Implement Res Eval-LEAs Upgrade Res	FY 91 Funding:	0
FY 92 Action: DVTE Implement Res Eval-LEAs Upgrade Res	FY 92 Funding:	0

Funding Option 1: LEAs Upgrade Prog Resources Via Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 24 Agriculture Scholarship Program — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: State Scholarship Board — 5-YR Funding: 90,000

FY 88 Action: Legislature Provide for Scholarship Prgm	FY 88 Funding:	0
FY 89 Action: Ag Bus & In Leaders Solicit Funds	FY 89 Funding:	0
FY 90 Action: Legislature Provide Matching Funds	FY 90 Funding:	30,000
FY 91 Action: Cooperative Efforts Continue	FY 91 Funding:	30,000
FY 92 Action: Cooperative Efforts Continue	FY 92 Funding:	30,000

Funding Option 1: Matching Funds Btwn Ag Bus. & Ind. & Legislature
Funding Option 2: None
Funding Option 3: None

Rec. No: 25 Program Standards Development — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Instruction & Div of Vo-Tech — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Dvlpmnt of Stds	FY 88 Funding:	0
FY 89 Action: Div of Instr Dvlp K-8 Stds for AITC	FY 89 Funding:	0
FY 90 Action: Utilize Stds in AITC Pilot Test	FY 90 Funding:	0
FY 91 Action: None	FY 91 Funding:	0
FY 92 Action: Utilize Standards in Implementation	FY 92 Funding:	0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 26 Faciltiy & Equipment Standards — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vo-Tech & Local Educ Agencies — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Development	FY 88 Funding:	0
FY 89 Action: DVTE Develop Facility & Equip Standards	FY 89 Funding:	0
FY 90 Action: LEAs Implement Standards	FY 90 Funding:	0
FY 91 Action: LEAs Implement Standards	FY 91 Funding:	0
FY 92 Action: LEAs Implement Standards	FY 92 Funding:	0

Funding Option 1: Note: Standards be developed for Agri-Arts Prog,
Funding Option 2: Secondary Ed in Ag Programs, and Two-Year
Funding Option 3: Postsecondary Ed in Ag Programs

Rec. No: 27 Agriculture Orientation for K-8 Grades — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Division of Instruction — 5-YR Funding: 0

FY 88 Action: Legislature Provide for AITC Equal Access	FY 88 Funding:	0
FY 89 Action: Implementation as per Recommendation 5	FY 89 Funding:	0
FY 90 Action: Implementation as per Recommendation 5	FY 90 Funding:	0
FY 91 Action: Implementation as per Recommendation 5	FY 91 Funding:	0
FY 92 Action: Implementation as per Recommendation 5	FY 92 Funding:	0

Funding Option 1: Funding as per Recommendation 5
Funding Option 2: None
Funding Option 3: None

Rec. No: 28 LEAs Provide Access To Educ in Ag — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Local Education Agencies — 5-YR Funding: 0

FY 88 Action: MSDE Develop Suitable Action Plan	FY 88 Funding:	0
FY 89 Action: Perm Commission to Review & Approve Plan	FY 89 Funding:	0
FY 90 Action: LEAs Provide Equal Access to Ed in Ag	FY 90 Funding:	0
FY 91 Action: LEAs Provide Equal Access to Ed in Ag	FY 91 Funding:	0
FY 92 Action: LEAs Provide Equal Access to Ed in Ag	FY 92 Funding:	0

Funding Option 1: Funding Provided through Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 29 Proactive Minority Recruitment Program — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 50,000

FY 88 Action: Legislature Provide for Recruitment Prog	FY 88 Funding:	0
FY 89 Action: DVTE Dev Recruitment Program & Standards	FY 89 Funding:	20,000
FY 90 Action: DVTE Implement Recruitment Program	FY 90 Funding:	10,000
FY 91 Action: Continue Implementing Recruitment Prog	FY 91 Funding:	10,000
FY 92 Action: Continue Implementing Recruitment Prog	FY 92 Funding:	10,000

Funding Option 1: Seek Foundation Grant
Funding Option 2: State Budget Item
Funding Option 3: Other Federal Funds

Rec. No: 30 Intro Ag Courses in Comm Colleges — Funding Required: No
Assigned Agency: State Board for Community Colleges
Implementing Body: Community Colleges — 5-YR Funding: 0

FY 88 Action: SBCC & DVTE Identify 3 Basic Ag Courses	FY 88 Funding:	0
FY 89 Action: DVTE & UMCP & UMES Develop Curriculum	FY 89 Funding:	0
FY 90 Action: Comm Colleges Implement Ag Courses	FY 90 Funding:	0
FY 91 Action: Comm Colleges Implement Ag Courses	FY 91 Funding:	0
FY 92 Action: Comm Colleges Implement Ag Courses	FY 92 Funding:	0

Funding Option 1: Funding of Courses through Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 31 Postsecondary Program Tuition Agreement — Funding Required: No
Assigned Agency: State Board for Community Colleges
Implementing Body: Community Colleges, Univ of MD — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Tuition Agreement	FY 88 Funding:	0
FY 89 Action: SBCC & IAA Develop Tuition Plan	FY 89 Funding:	0
FY 90 Action: Comm College Initiate Implementation	FY 90 Funding:	0
FY 91 Action: Continue Implementation	FY 91 Funding:	0
FY 92 Action: Continue Implementation	FY 92 Funding:	0

Funding Option 1: Funding Provided through Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 32 Agricultural Publications Availability — Funding Required: No
Assigned Agency: The University of Maryland
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 0

FY 88 Action: Legislature provide for Agreement	FY 88 Funding:	0
FY 89 Action: UM & ICCEA Develop Proposed Action Plan	FY 89 Funding:	0
FY 90 Action: ICCEA & UM Implement Plan	FY 90 Funding:	0
FY 91 Action: ICCEA & UM Continue Implementation	FY 91 Funding:	0
FY 92 Action: ICCEA & UM Continue Implementation	FY 92 Funding:	0

Funding Option 1: Funding provided through Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 33 Ag Bi-Monthly Newsletter for Teachers — Funding Required: Yes
Assigned Agency: Maryland Department of Agriculture
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 29,000

FY 88 Action: MDA & ICCEA Develop Plan of Action	FY 88 Funding:	0
FY 89 Action: ICCEA Set Up Layout and Issue Themes	FY 89 Funding:	5,000
FY 90 Action: ICCEA Begin Publication	FY 90 Funding:	8,000
FY 91 Action: Publication Continues (six issues)	FY 91 Funding:	8,000
FY 92 Action: Publication Continues (six issues)	FY 92 Funding:	8,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 34 Maryland Educ in Ag Computer Network — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 210,000

FY 88 Action: DVTE Prog Spec in Ag Develop Action Plan	FY 88 Funding:	0
FY 89 Action: DVTE Prog Spec in Ag Develop Guidelines	FY 89 Funding:	0
FY 90 Action: DVTE Implement Ed in Ag Network in LEAs	FY 90 Funding:	200,000
FY 91 Action: DVTE Maintain Ed in Ag Network	FY 91 Funding:	5,000
FY 92 Action: DVTE Maintain Ed in Ag Network	FY 92 Funding:	5,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 35 Telecommunication Lines for Network — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 16,000

FY 88 Action: DVTE Prog Spec in Ag Develop Action Plan	FY 88 Funding:	0
FY 89 Action: DVTE Prog Spec in Ag Develop Guidelines	FY 89 Funding:	0
FY 90 Action: DVTE Coordinate Implementation in LEAs	FY 90 Funding:	16,000
FY 91 Action: None	FY 91 Funding:	0
FY 92 Action: None	FY 92 Funding:	0

Funding Option 1: State Budget Item
Funding Option 2: Seek Foundation Grant
Funding Option 3: None

Rec. No: 36 Use of Cable & Public TV for Ag Promo — Funding Required: No
Assigned Agency: Maryland Department of Agriculture
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 0

FY 88 Action: MDA & ICCEA Develop Plan of Action	FY 88 Funding:	0
FY 89 Action: ICCEA Develop PSAs and Implement	FY 89 Funding:	0
FY 90 Action: ICCEA Seek Programming for Public TV	FY 90 Funding:	0
FY 91 Action: ICCEA Implement TV Programming	FY 91 Funding:	0
FY 92 Action: Continue Efforts	FY 92 Funding:	0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 37 Extended Day Compensation/Release Time — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Local Education Agencies — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Policy Change	FY 88 Funding: 0
FY 89 Action: DVTE Develop Suggested Guidelines	FY 89 Funding: 0
FY 90 Action: LEAs Implement as Appropriate	FY 90 Funding: 0
FY 91 Action: LEAs Implement as Appropriate	FY 91 Funding: 0
FY 92 Action: LEAs Implement as Appropriate	FY 92 Funding: 0

Funding Option 1: LEAs Will Provide Funding If Required
Funding Option 2: None
Funding Option 3: None

Rec. No: 38 Twelve Month Agriculture Programs — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Local Education Agencies — 5-YR Funding: 720,000

FY 88 Action: Legislature Provide for Twelve Month Prog	FY 88 Funding: 0
FY 89 Action: LEAs Implement Twelve Month Ag Programs	FY 89 Funding: 180,000
FY 90 Action: LEAs Implement Twelve Month Ag Programs	FY 90 Funding: 180,000
FY 91 Action: LEAs Implement Twelve Month Ag Programs	FY 91 Funding: 180,000
FY 92 Action: LEAs Implement Twelve Month Ag Programs	FY 92 Funding: 180,000

Funding Option 1: Legislature Appropriate 75% - LEA's 25%
Funding Option 2: LEAs Fund 100%
Funding Option 3: None

Rec. No: 39 Articulation of Educ in Ag Programs — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: SBCC, DVTE, Div of Inst & UM — 5-YR Funding: 0

FY 88 Action: SBCC, DVTE, DIV of Inst Formulate Plan	FY 88 Funding: 0
FY 89 Action: SBCC & MSDE Develop Implementation Plan	FY 89 Funding: 0
FY 90 Action: Initiate Articulation Implementation	FY 90 Funding: 0
FY 91 Action: Continue Implementation	FY 91 Funding: 0
FY 92 Action: Continue Implementation	FY 92 Funding: 0

Funding Option 1: Articulation Funded through Regular Channels
Funding Option 2: None
Funding Option 3: None

Rec. No: 40 Postsecondary Student Organizations — Funding Required: No
Assigned Agency: State Board for Community Colleges
Implementing Body: Community Colleges & IAA — 5-YR Funding: 0

FY 88 Action: DVTE Develop & Disseminate Guidelines	FY 88 Funding: 0
FY 89 Action: Implement Where Feasiable	FY 89 Funding: 0
FY 90 Action: None	FY 90 Funding: 0
FY 91 Action: None	FY 91 Funding: 0
FY 92 Action: None	FY 92 Funding: 0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 41 Maryland FFA Study Continued — Funding Required: No
Assigned Agency: MSDE-Div of Vocational-Technical Educ
Implementing Body: Maryland FFA Association — 5-YR Funding: 0

FY 88 Action: Proceed with Study In Progress	FY 88 Funding: 0
FY 89 Action: FFA Implement Identified Changes	FY 89 Funding: 0
FY 90 Action: Implementation of Identified Changes	FY 90 Funding: 0
FY 91 Action: Implementation of Identified Changes	FY 91 Funding: 0
FY 92 Action: Implementation of Identified Changes	FY 92 Funding: 0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 42 Statewide Occupational Experience Program — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Institute of Applied Agriculture — 5-YR Funding: 0

FY 88 Action: Legislature Provide for State Program	FY 88 Funding: 0
FY 89 Action: IAA Develop Plan of Action	FY 89 Funding: 0
FY 90 Action: IAA Dev & Implement State Occ Exp Prog	FY 90 Funding: 0
FY 91 Action: Continue Implementation	FY 91 Funding: 0
FY 92 Action: Continue Implementation	FY 92 Funding: 0

Funding Option 1: Funding Concurrent w/ Placement & Follow-Up Prog
Funding Option 2: None
Funding Option 3: None

Rec. No: 43 Ag Orientation Seminar for Adm/Guidance — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 60,000

FY 88 Action: DVTE Develop Proposed Seminar	FY 88 Funding: 0
FY 89 Action: Coordinate & Implement with LEAs	FY 89 Funding: 15,000
FY 90 Action: Continue Implementation	FY 90 Funding: 15,000
FY 91 Action: Continue Implementation	FY 91 Funding: 15,000
FY 92 Action: Continue Implementation	FY 92 Funding: 15,000

Funding Option 1: State Budget Item
Funding Option 2: MSDE Existing Funds for Inservice
Funding Option 3: None

Rec. No: 44 New Postsecondary Guidance Positions — Funding Required: No
Assigned Agency: State Board for Community Colleges
Implementing Body: Comm Colleges & IAA — 5-YR Funding: 0

FY 88 Action: SBCC Conduct Feasibility Study	FY 88 Funding: 0
FY 89 Action: Dvlpmnt of Job Dscrptn & Position Qual	FY 89 Funding: 0
FY 90 Action: Comm College Initiate Implementation	FY 90 Funding: 0
FY 91 Action: Comm College Continue Implementation	FY 91 Funding: 0
FY 92 Action: Comm College Continue Implementation	FY 92 Funding: 0

Funding Option 1: Funding From Existing Agency Funds
Funding Option 2: None
Funding Option 3: None

Rec. No: 45 Permanent Commission on Educ in Ag — Funding Required: Yes
Assigned Agency: Maryland Department of Agriculture
Implementing Body: MD State Dept of Ed & MD Dept of Ag — 5-YR Funding: 29,500

FY 88 Action: Legislature Provide for Perm Commission	FY 88 Funding:	0
FY 89 Action: Governor Appoints Commission Members	FY 89 Funding:	4,000
FY 90 Action: Commission on Ed in Ag Continues Role	FY 90 Funding:	8,500
FY 91 Action: Commission on Ed in Ag Continues Role	FY 91 Funding:	8,500
FY 92 Action: Commission on Ed in Ag Continues Role	FY 92 Funding:	8,500

Funding Option 1: State Budget Item
Funding Option 2: Note: DVTE Prog Spec in Ag to Serve as Comm Staff
Funding Option 3: w/ 1/2 Clerical at DI/AITC funded in Rec 5

Rec. No: 46 Development of Handbook of Ag Careers — Funding Required: Yes
Assigned Agency: Department of Natural Resources
Implementing Body: Interagency Coordinating Committee — 5-YR Funding: 50,000

FY 88 Action: DNR Develop a Plan of Action	FY 88 Funding:	0
FY 89 Action: ICCEA Develop & Implement RFP	FY 89 Funding:	0
FY 90 Action: Contract & Begin Development of Handbook	FY 90 Funding:	30,000
FY 91 Action: Complete Develop & Begin Dissemination	FY 91 Funding:	10,000
FY 92 Action: Continue Handbook Dissemination	FY 92 Funding:	10,000

Funding Option 1: Seek Foundation Grant
Funding Option 2: State Budget Item
Funding Option 3: None

Rec. No: 47 Individual Program Advisory Committees — Funding Required: No
Assigned Agency: MSDE-Div of Vocational-Technical Educ
Implementing Body: Individual Ag Programs in LEAs — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Prog Advis Comm	FY 88 Funding:	0
FY 89 Action: DVTE Develop & Disseminate Guidelines	FY 89 Funding:	0
FY 90 Action: LEAs Develop Individual Prog Advis Comm	FY 90 Funding:	0
FY 91 Action: LEAs Develop Individual Prog Advis Comm	FY 91 Funding:	0
FY 92 Action: LEAs Develop Individual Prog Advis Comm	FY 92 Funding:	0

Funding Option 1: Funding Provided by LEAs
Funding Option 2: Note: Separate Program Advisory Comm Developed
Funding Option 3: for Each High Schl, Voc Center, CC Ag Prog

Rec. No: 48 LEA Staffing for Agriculture Programs — Funding Required: Yes
Assigned Agency: MSDE-Div of Vocational-Technical Educ
Implementing Body: Local Education Agencies — 5-YR Funding: 180,000

FY 88 Action: Legislature Provide for New Ag Staffing	FY 88 Funding:	0
FY 89 Action: Fund 25% of Staff Added on Contact Hr Req	FY 89 Funding:	45,000
FY 90 Action: LEAs Implement New Ag Staffing as Needed	FY 90 Funding:	45,000
FY 91 Action: LEAs Implement New Ag Staffing as Needed	FY 91 Funding:	45,000
FY 92 Action: LEAs Implement New Ag Staffing as Needed	FY 92 Funding:	45,000

Funding Option 1: State Budget Item
Funding Option 2: Note: 1 Staff indep of Enroll w/ min 4 Ag Classes
Funding Option 3: Add Staff as Student Contact Hrs Exceed 100/Staff

Rec. No: 49 DVTE FFA Specialist Made Full-Time — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 100,000

FY 88 Action: Legislature Provide For Fulltime FFA Spec	FY 88 Funding:	0
FY 89 Action: DVTE Assign FFA Specialist to Fulltime	FY 89 Funding:	25,000
FY 90 Action: DVTE Continue Fulltime FFA Specialist	FY 90 Funding:	25,000
FY 91 Action: DVTE Continue Fulltime FFA Specialist	FY 91 Funding:	25,000
FY 92 Action: DVTE Continue Fulltime FFA Specialist	FY 92 Funding:	25,000

Funding Option 1: Appropriation of Additional Funds to MSDE/DVTE
Funding Option 2: None
Funding Option 3: None

Rec. No: 50 Additional Clerical Support DVTE — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 100,000

FY 88 Action: Legislature Provide for Clerical Support	FY 88 Funding:	0
FY 89 Action: DVTE Assign One Additional Secretary	FY 89 Funding:	25,000
FY 90 Action: DVTE Continue Implementation	FY 90 Funding:	25,000
FY 91 Action: DVTE Continue Implementation	FY 91 Funding:	25,000
FY 92 Action: DVTE Continue Implementation	FY 92 Funding:	25,000

Funding Option 1: Appropriation of Additional Funds to MSDE/DVTE
Funding Option 2: None
Funding Option 3: None

Rec. No: 51 FFA Projects Consultant — Funding Required: Yes
Assigned Agency: MSDE-Div of Vocational-Technical Educ
Implementing Body: Institute of Applied Agriculture — 5-YR Funding: 200,000

FY 88 Action: Legislature Provide for FFA Proj Consult	FY 88 Funding:	0
FY 89 Action: IAA Provided Line with Clerical Support	FY 89 Funding:	50,000
FY 90 Action: IAA Continue FFA Projects Consultant	FY 90 Funding:	50,000
FY 91 Action: IAA Continue FFA Projects Consultant	FY 91 Funding:	50,000
FY 92 Action: IAA Continue FFA Projects Consultant	FY 92 Funding:	50,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 52 Standards & Added Funds for Inservice — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 40,000

FY 88 Action: Legislature Provide for Standards	FY 88 Funding:	0
FY 89 Action: DVTE Develop Stds,Inservice, Add Funds	FY 89 Funding:	10,000
FY 90 Action: Ag Spec Dev Annual & Indepth Inservice	FY 90 Funding:	10,000
FY 91 Action: Ag Spec Dev Annual & Indepth Inservice	FY 91 Funding:	10,000
FY 92 Action: Ag Spec Dev Annual & Indepth Inservice	FY 92 Funding:	10,000

Funding Option 1: State Budget Item
Funding Option 2: Note: Additional Annual Inservice Funds: 5,000
Funding Option 3: Note: Additional Indepth Inservice Funds: 5,000

Rec. No: 53 AITC Teacher Inservice Stds & Funds — Funding Required: Yes
Assigned Agency: Maryland State Department of Education
Implementing Body: Division of Instruction — 5-YR Funding: 90,000

FY 88 Action: Legislature Provide for Standards	FY 88 Funding:	0
FY 89 Action: Division of Instruction Dev Standards	FY 89 Funding:	0
FY 90 Action: K-8 Coordinator Dev & Pilot Inservice	FY 90 Funding:	10,000
FY 91 Action: K-8 Coordinator Dev & Implmnt Inservice	FY 91 Funding:	40,000
FY 92 Action: K-8 Coordinator Dev & Implmnt Inservice	FY 92 Funding:	40,000

Funding Option 1: State Budget Item
Funding Option 2: None
Funding Option 3: None

Rec. No: 54 Earmarked Funds for 9-12 Educ in Ag — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Earmarked Funds	FY 88 Funding:	0
FY 89 Action: None	FY 89 Funding:	0
FY 90 Action: None	FY 90 Funding:	0
FY 91 Action: None	FY 91 Funding:	0
FY 92 Action: None	FY 92 Funding:	0

Funding Option 1: State Budget Item
Funding Option 2: Note: Relates To 9-12 Funds Proposed Herewithin
Funding Option 3: None

Rec. No: 55 Maintain Education in Ag Programs — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Local Education Agencies — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Maint of Ag Prgm	FY 88 Funding:	0
FY 89 Action: None	FY 89 Funding:	0
FY 90 Action: None	FY 90 Funding:	0
FY 91 Action: None	FY 91 Funding:	0
FY 92 Action: None	FY 92 Funding:	0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 56 Math and Science Credit for Ag Classes — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Local Education Agencies — 5-YR Funding: 0

FY 88 Action: Legislature Provide for Policy Change	FY 88 Funding:	0
FY 89 Action: Math-Science Credits be Dev in MD Model	FY 89 Funding:	0
FY 90 Action: LEAs Evaluate Ag for Math/Sci Credit	FY 90 Funding:	0
FY 91 Action: Implementation by LEAs	FY 91 Funding:	0
FY 92 Action: Implementation by LEAs	FY 92 Funding:	0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 57 Impact of Foreign Language Requirement — Funding Required: No
Assigned Agency: Maryland State Department of Education
Implementing Body: Div of Vocational-Technical Education — 5-YR Funding: 0

FY 88 Action: Legislature Provide Policy Statement	FY 88 Funding: 0
FY 89 Action: DVTE Develop Guidelines & Disseminate	FY 89 Funding: 0
FY 90 Action: LEAs Implement Guidelines	FY 90 Funding: 0
FY 91 Action: LEAs Implement Guidelines	FY 91 Funding: 0
FY 92 Action: LEAs Implement Guidelines	FY 92 Funding: 0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 58 UMCP Continue Evaluation of Ag College — Funding Required: No
Assigned Agency: The University of Maryland
Implementing Body: College of Agriculture — 5-YR Funding: 0

FY 88 Action: UMCP Continue Evaluation College of Ag	FY 88 Funding: 0
FY 89 Action: UMCP Implement Needed Changes	FY 89 Funding: 0
FY 90 Action: None	FY 90 Funding: 0
FY 91 Action: None	FY 91 Funding: 0
FY 92 Action: None	FY 92 Funding: 0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 59 Citizen Petition for Educ in Ag Prgms — Funding Required: No
Assigned Agency: To be Assigned by Legislature
Implementing Body: Permanent Commission on Educ in Ag — 5-YR Funding: 0

FY 88 Action: Legislature Provide Right to Petition	FY 88 Funding: 0
FY 89 Action: Petition Used As Needed	FY 89 Funding: 0
FY 90 Action: Petition Used As Needed	FY 90 Funding: 0
FY 91 Action: Petition Used As Needed	FY 91 Funding: 0
FY 92 Action: Petition Used As Needed	FY 92 Funding: 0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

Rec. No: 60 Ag in the Classroom Foundation — Funding Required: No
Assigned Agency: Maryland Department of Agriculture
Implementing Body: Permanent Commission On Educ in Ag — 5-YR Funding: 0

FY 88 Action: Perm Comm Develop a Plan of Action	FY 88 Funding: 0
FY 89 Action: Ag in the Classroom Foundation Initiated	FY 89 Funding: 0
FY 90 Action: MD AITC Foundation Begins Operation	FY 90 Funding: 0
FY 91 Action: Continue Foundation Activities	FY 91 Funding: 0
FY 92 Action: Continue Foundation Activities	FY 92 Funding: 0

Funding Option 1: None
Funding Option 2: None
Funding Option 3: None

RECOMMENDATIONS REQUIRING NEW FUNDING WITH FUNDING LEVELS BY YEAR

No.	Recommendation	FY-89	FY-90	FY-91	FY-92	TOTAL
1	Develop Maryland Model for Ed in Ag	20,000	30,000	30,000	10,000	90,000
2	Develop Ag Employment Data System	5,000	25,000	25,000	5,000	60,000
3	New Agriculture Programs and Options	25,000	25,000	25,000	25,000	100,000
4	MD Ag Placement & Follow-Up Program	10,000	18,000	18,000	30,000	76,000
5	Ag in the Classroom (AITC) Program	30,000	80,000	150,000	100,000	360,000
6	K-8 Agriculture (AITC) Coordinator	65,000	65,000	65,000	65,000	260,000
13	UMCP Model Teacher Educ Facilities	30,000	150,000	200,000	300,000	680,000
14	UMES Agricultural Mechanics Facility	30,000	450,000	100,000	0	580,000
15	UMCP Increased Teacher Educ Staff	0	100,000	200,000	300,000	600,000
16	UMES Increased Teacher Educ Staff	0	100,000	100,000	100,000	300,000
18	Interagency Coord Comm on Educ in Ag	1,500	3,000	3,000	3,000	10,500
19	Develop Public Relations Package	5,000	10,000	10,000	10,000	35,000
21	Develop Educator Ag Awareness Prog	0	2,500	2,500	2,500	7,500
24	Agriculture Scholarship Program	0	30,000	30,000	30,000	90,000
29	Proactive Minority Recruitment Prog	200,000	100,000	10,000	10,000	50,000
33	Ag Bi-Monthly Newsletter to Teachers	5,000	8,000	8,000	8,000	29,000
34	Maryland Educ in Ag Computer Network	0	200,000	5,000	5,000	210,000
35	Telecommunication Lines for Network	0	16,000	0	0	16,000
38	Twelve Month Agriculture Programs	180,000	180,000	180,000	180,000	720,000
43	Ag Orientation Seminar for Adm/Guid	15,000	15,000	15,000	15,000	60,000
45	Permanent Commission on Educ in Ag	4,000	8,500	8,500	8,500	29,500
46	Development of Ag Careers Handbook	0	30,000	10,000	10,000	50,000
48	LEA Staffing for Agriculture Program	45,000	45,000	45,000	45,000	180,000
49	DVTE FFA Specialist Made Full-Time	25,000	25,000	25,000	25,000	100,000
50	Additional Clerical Support DVTE	25,000	25,000	25,000	25,000	100,000
51	FFA Projects Consultant	50,000	50,000	50,000	50,000	200,000
52	Standards & Added Funds - Inservice	10,000	10,000	10,000	10,000	40,000
53	AITC Teacher Inservice Stds & Funds	0	100,000	40,000	40,000	90,000
	TOTALS	780,500	1,901,000	1,390,000	1,412,000	5,123,500

FY-88 ACTION SPECIFIED FOR RECOMMENDATIONS NOT REQUIRING NEW FUNDING

	Recommendation	FY-88 Action
7	Middle School Agriculture Arts Prog	Legislature Provide for Ag Arts Program
8	Student Occupational Interest Surveys	DI & DVTE Develop State Plan of Action
9	Agricultural Science & Tech Program	Legislature Provide for New Program
10	Governor's High Schools of Ag Science	Governor Appoints Perm Comm as Study Team
11	Regional Postsecondary Ag Programs	SBCC & DVTE & UM Adopt Regional Ag Prgm
12	UM Two Year Ag Program Policies	Legislature Provide for Policy Change
17	Intro Ag Courses for Elem Ed Majors	Legislature Provide Elem Ed Ag Courses
20	State Definition of Agriculture	Legislature Provide for Definition of Ag
22	Revising Education in Ag Terminology	Legislature Provide for Policy Change
23	Evaluating Ed in Ag Program Resources	Legislature Provide for Evaluation Plan
25	Program Standards Development	Legislature Provide for Dvlpmnt of Stds
26	Faciltiy & Equipment Standards	Legislature Provide for Development
27	Agriculture Orientation for K-8 Grades	Legislature Provide for AITC Equal Access
28	LEAs Provide Access To Educ in Ag	MSDE Develop Suitable Action Plan
30	Intro Ag Courses in Comm Colleges	SBCC & DVTE Identify 3 Basic Ag Courses
31	Postsecondary Prog Tuition Agreement	Legislature Provide for Tuition Agreement
32	Agricultural Publications Availability	Legislature provide for Agreement
36	Use of Cable & Public TV for Ag Promo	MDA & ICCEA Develop Plan of Action
37	Extended Day Compensation/Release Time	Legislature Provide for Policy Change
39	Articulation of Educ in Ag Programs	SBCC, DVTE, DIV of Inst Formulate Plan
40	Postsecondary Student Organizations	DVTE Develop & Disseminate Guidelines
41	Maryland FFA Study Continued	Proceed with Study In Progress
42	Statewide Occupational Experience Prog	Legislature Provide for State Program
44	New Postsecondary Guidance Positions	SBCC Conduct Feasibility Study
47	Individual Program Advisory Committees	Legislature Provide for Prog Advis Comm
54	Earmarked Funds for 9-12 Educ in Ag	Legislature Provide for Earmarked Funds
55	Maintain Education in Ag Programs	Legislature Provide for Maint of Ag Prgm
56	Math and Science Credit for Ag Classes	Legislature Provide for Policy Change
57	Impact of Foreign Language Requirement	Legislature Provide Policy Statement
58	UMCP Continue Evaluation of Ag College	UMCP Continue Evaluation College of Ag
59	Citizen Petition for Educ in Ag Prgms	Legislature Provide Right to Petition
60	Ag in the Classroom Foundation	Perm Comm Develop a Plan of Action

CONCLUDING REMARKS

The Governor's Commission on Education in Agriculture has reviewed a wealth of materials, expertise, and testimony in assessing the status of education in Agriculture in Maryland. Perhaps, the single most important finding of the Commission is that during a period when agricultural business and industry is expanding, we are not meeting its trained workforce needs. Instead, we watch our best agriculturally oriented young people move out of State for training while importing trained manpower for our agricultural industry. That situation does not serve the best interests of Maryland and its citizens. We must reverse those trends by providing quality education in agriculture for Maryland. Commission members stand ready to undertake the task in order to assure a strong and viable agricultural industry for new generations of Maryland citizens. For education in agriculture, "Maryland With Pride" is a necessity.